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On the cover: Neotrops lorenae, n. sp., male from La Plata, Argentina; habitus in lateral view.

GRISMADO AND RAMÍREZ: *NEOTROPS*

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The New World Goblin Spiders of the New Genus *Neotrops* (Araneae: Oonopidae), Part 1

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and Martín J. Ramírez

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THE NEW WORLD GOBLIN SPIDERS OF THE NEW GENUS *NEOTROPS* (ARANEAE: OONOPIDAE), PART 1

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ABSTRACT

A new genus of soft-bodied oonopids, *Neotrops,* is established for a large assemblage of goblin spiders found in all tropical and subtropical areas of the Neotropical region, from Panama to Uruguay and central Argentina. Members of *Neotrops* have spinose forelegs, and share a general palpal morphology with those of *Heteroonops* Dalmas, but have a prolateral conductor connected with an internal bulbal vesicle that presumably discharges its secretion through a prolateral slit. Females lack a posterior receptacle in the internal genitalia, having only a posterodorsal plate serving for muscle attachment. Here we treat all the species except those from Brazil, which will be addressed in a subsequent paper. Twenty-three new species are described: *N. darwini* (type species), *N. lorenae,* and *N. sciosciae* (from Argentina and Uruguay); *N. yunga, N. piacentinii, N. poguazu,* and *N. lopardoae* (from Argentina); *N. rubioi, N. pombero,* and *N. avalosi* (from Argentina and Paraguay); *N. labarquei* (from Uruguay), *N. yabare, N. izquierdoi,* and *N. kopuchianae* (from Bolivia); *N. pithecia, N. silvae,* and *N. pakitza* (from Peru); *N. platnicki,* and *N. waorani* (from Ecuador); *N. santamarta* and *N. caparu* (from Colombia); and *N. maracay* and *N. amacuro* (from Venezuela). Four additional species, previously placed in *Oonops* Templeton, are transferred here to *Neotrops*: *O. nigromaculatus* Mello-Leitão, from Argentina and Uruguay; *O. tucumanus* Simon, from Argentina; *O. donaldi* Chickering, from Panama; and *O. trapellus* Chickering, from Trinidad and Venezuela. The females of the three latter species are here described for the first time. Most of the species are known from the leaf litter or the foliage of tropical and subtropical forests, but also from grasslands in the southern parts of their distributional range, where they appear as the dominant soft-bodied oonopids. The relationships of this new taxon are briefly discussed, and intrageneric groupings are also proposed.

INTRODUCTION

The higher taxonomy of Oonopidae was recently redefined by Platnick et al. (2012). Not surprisingly, the classical arrangement of "molles" and "loricates," for species with soft and sclerotized abdomens, respectively, turned out to be artificial. As would be expected for a plesiomorphic condition, the soft-bodied oonopids are now included in all three known subfamilies, Orchestininae, Sulsulinae, and Oonopinae. Most of the known species of oonopids share an infrequent morphology in the male copulatory bulb: the sperm duct is inconspicuous, without a clear trajectory, and not sclerotized. This contrasts with the widespread condition in spiders, where the sperm duct has heavily sclerotized, thick walls (see, e.g., Huber, 2004). This condition was proposed as a synapomorphy of Oonopinae, as redefined in Platnick et al. (2012).

Several of the soft-bodied oonopines of the New World are still listed under *Oonops* Templeton, although it is nowadays clear that they are not closely related with the type species, *Oonops pulcher*, apparently originally from Europe but introduced at least in Tasmania (Platnick and Dupérré, 2009b). This genus has been frequently used as a wastebasket group for soft-bodied oonopids with spinose forelegs, and also for some species without leg spines and with the copulatory bulb fused with the cymbium, such as *O. reticulatus* Petrunkevitch and its probable relatives, as *O. ornatus*, Chickering, and *O. tectulus* Chickering (see Chickering, 1951, 1970). The recent revision of *Heteroonops* by Platnick and Dupérré (2009b) removed a large chunk of circum-Caribbean species with posteriorly directed projections on the endites of males and with spinose female pedipalps apart from *Oonops*.

A detailed examination of the female genitalia of *O. nigromaculatus* Mello-Leitão, especially by SEM, revealed that the posterodorsal element, formerly identified as a posterior receptacle by Grismado et al. (2010), is in fact a solid, rounded plate, with an anterior concavity that covers the anterior elements (fig. 33). This structure also appears in a large group of soft-bodied oonopids with spinose forelegs distributed across most of South America, thus suggesting a monophyletic group. In contrast, both *Oonops* and *Heteroonops* (and the probably related undescribed taxa mentioned by Platnick and Dupérré, 2009b: 19) retain a posterior

receptacle typical of the dysderoid condition (Burger, 2011, 2013).

These spinose species with a posterodorsal plate have a male palp morphology more similar to that of *Heteroonops* than to *Oonops*. They present an embolus curved to the prolateral side, accompanied by an apical conductor of variable shape. Clarifying the palps with clove oil reveled an internal vesicle connecting to the conductor, suggesting some kind of secretory function of that structure (figs. 26, 40, 53, 60, 69, 76, 86, 99, 109, 116). The SEM images of some species show a narrow slit, presumably the point of discharge of the vesicle (figs. 15C–D, 44D–E). This feature has not been found in either *Oonops* or *Heteroonops*. We propose the new genus *Neotrops* for these species with a posterodorsal plate on the female genitalia and a vesicle in the male copulatory bulb discharging in the conductor. All the species of *Neotrops* have spinose forelegs (figs. 4F, G, 5A, C–D, 12E–G, 32C–G, 95A–F), and differ from *Heteroonops* by lacking the posteriorly directed projection on the male endites or spinose female palps characteristic of that genus.

Grismado et al. (2010) found that the males of *Oonops nigromaculatus* have a sclerotized stripe in the anterodorsal part of the male abdomen, not found in any of the "molles" oonopids known to date (fig. 27). In this contribution we report two additional, closely related species from northern Argentina and Paraguay with such stripes and very similar genitalia.

Burger (2011, 2013) presented detailed studies of the female internal genital anatomy for three species of soft-bodied oonopids: *Heteroonops spinimanus* (Simon, 1891), *Oonops pulcher,* and "*Oonopinus" kilikus* Suman, 1965. The three species showed the basic "dysderoid" configuration of anterior and posterior receptacles, but with different degrees of loss of the sperm-storage function for the anterior receptacle. This trend was also suggested by Izquierdo and Labarque (2010) in orsolobids. The hypothesis suggests that the anterior portion of the female genitalia was transformed into a highly modified structure serving mainly as attachment for muscles implicated in sexual behavior mechanisms. However, in all species of *Neotrops*, the anterior receptacle seems to maintain the storage function, with a defined lumen and associated gland ducts, while the posterior receptacle is absent, having only a solid plate, more dorsally placed and serving for muscle attachment. A similar configuration occurs in *Dalmasula* (Platnick et al., 2012: figs. 296–298) and in some species of *Orchestina* Simon (Burger et al., 2010: 104; Henrard and Jocqué, 2012: figs. 10, 11, 35; Tong and Li, 2011: 48); at this point it is premature to hypothesize whether this similarity in the posterior plate in representatives of three subfamilies is due to convergence or to plesiomorphic retention.

The new genus *Neotrops* seems to be distributed in almost all the South American subcontinent, mainly in tropical and subtropical areas. This first paper deals on the fauna outside Brazil. A provisional sorting of Brazilian collections rendered about as many potential species as in all the other South American countries together. The logistic complexity of dealing with those large collections, especially the one at Instituto Butantan, São Paulo, was the deciding factor for presenting this work in two parts.

Based upon the species here described and preliminary observations while sorting the Brazilian material, eastern and southeastern Brazil, and northeastern Argentina harbor the largest specific and morphological diversity, especially in the soil fauna of tropical and subtropical forests. In comparison, northern and western South America has a lower diversity, perhaps related to the presence of other (still undescribed) genera competing for the same niches. The new species *Neotrops waorani* has been collected in extraordinary numbers by fogging the canopy in the Ecuadorian Amazonia, which suggests that this technique may bring further species when applied in other localities (see Fannes et al., 2008).

We have not been able to examine all the types of species that could conceivably belong to *Neotrops* but are currently listed in other genera (e.g., *Oonopinus aurantiacus* Simon, 1893, and *Oonops leitaoni* Bristowe, 1938). We hope that this material will be available for subsequent studies of the participants of the PBI project, where the hypothesis of the delimitation and composition of

Neotrops will be tested and refined. We were able to examine the types of *Oonops globimanus* Simon, *O. itascus* Chickering, and *O. pulicarius* Simon, and specimens of *Oonops acanthopus* Simon (identified by Antonio D. Brescovit, in Instituto Butantan), none of which have the characters that we use here to delimit *Neotrops*. These taxa are currently under study by us and other participants of the PBI project, and will be redescribed in subsequent contributions.

MATERIAL AND METHODS

Our methods follow those of Platnick and Dupérré (2009a, 2009b). Female genitalia were observed in clove oil. Scanning electron micrographs were taken under high vacuum with a FEI XL30 TMP after critical point drying and gold-palladium coating. Drawings were made with camera lucida mounted on a compound microscope Olympus BH-2. Photographs of the preserved specimens were taken with a digital camera Leica DFC 290 mounted on a stereoscopic microscope Leica M165 C, and the focal planes were composed with Helicon Focus 4.62.2. The descriptions were generated automatically from the Species Descriptive Database of the oonopid Planetary Biodiversity Inventory project. All measurements are expressed in millimeters; only differences from the males are mentioned in the descriptions of females. Leg spination descriptions mention only those surfaces bearing spines, and follows the format detailed in Grismado (2008). High-resolution, full-color versions of the images will be available on the goblin spider Planetary Biodiversity Inventory (PBI) project's website (http://research.amnh.org/oonopidae).

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CBF	Colección Boliviana de Fauna, La Paz, Bolivia
CDA	Cátedra de Diversidad Animal I, Universidad de Córdoba, Córdoba, Argentina
FCE	Facultad de Ciencias, Sección Entomología, Universidad de la República, Montevideo, Uruguay
GWU	George Washington University, Washington, DC
ICN	Instituto de Ciencias Naturales, Universidad Nacional, Bogotá, Colombia
MACN-Ar	Museo Argentino de Ciencias Naturales "Bernardino Rivadavia," Buenos Aires, Argentina
MEKRB	Museo de Entomología "Klaus Raven Buller," Universidad Nacional Agraria, La Molina, Peru
MIUP	Museo de Invertebrados G.B. Fairchild, Universidad de Panamá, Panamá
MLP	Museo de La Plata, La Plata, Argentina
MCZ	Museum of Comparative Zoology, Harvard University, Cambridge, MA
MHNG	Muséum d'Histoire Naturelle, Geneva, Switzerland
MNHN	Muséum National d'Histoire Naturelle, Paris, France
MUSM	Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, Peru
MZBS	Museo de Zoología, Barcelona, Spain
QCAZ	Museo de Zoología, Sección Invertebrados, Pontificia Universidad Católica, Quito, Ecuador
USNM	National Museum of Natural History, Smithsonian Inst., Washington DC, United States

TAXONOMY

Neotrops, new genus

TYPE SPECIES: *Neotrops darwini*, new species.

ETYMOLOGY: The generic name is a contraction of Neotropical and *Oonops*, and is masculine in gender.

DIAGNOSIS: *Neotrops* comprises soft-bodied oonopids usually with well-developed macrosetae on the forelegs. The males resemble those of *Heteroonops* by the palpal conformation, but differ by having a vesicle inside the bulb that connects to the conductor through a slitlike opening, presumably with secretory function (figs. 15C–F, 44 D–E), and by lacking the posteriorly directed projections on the endites. Females also resemble those of *Heteroonops,* but differ by having normal pedipalps (not particularly elongated or spinose), by lacking the posterior receptacle in the internal genitalia, and possessing only a more or less rounded plate, with an anterior concavity that covers dorsally the anterior elements (see figs. 10, 33, 68, 96).

DESCRIPTION MALE: **Cephalothorax:** Pars cephalica strongly elevated in lateral view, carapace without any pattern, usually broadly oval (ovoid in some species) in dorsal view, with rounded posterolateral corners, posterolateral edge without pits, posterior margin not bulging below posterior rim, anterolateral corners without extension or projections, posterolateral surface without spikes, surface of elevated portion of pars cephalica smooth, sides smooth, thorax without depressions, fovea absent (fig. 11A), without radiating rows of pits; lateral margin smooth, without denticles; plumose setae near posterior margin of pars thoracica absent; cuticle with elongated platelets, at least in some species (as in figs. 3A, 5B, 14A, 24G, 68E). Clypeus margin unmodified, curved downward in front view, vertical in lateral view, low, ALE separated from edge of carapace by less than their radius, median projection absent. Chilum absent. Eyes six, well developed; posterior eye row recurved from above (figs. 11C, 93C). Sternum uniform, not fused to carapace, median concavity absent, without radial furrows between coxae I–II, II–III, III–IV, radial furrow opposite coxae III absent, surface smooth, without pits, microsculpture absent, sickle-shaped structures absent, anterior corner unmodified, lateral margin without infracoxal grooves, distance between coxae approximately equal, precoxal triangles present, lateral margins unmodified, without posterior hump; setae dark, needlelike, originating from surface, without hair tufts. Mouthparts: chelicerae straight, anterior face unmodified; without teeth on both promargin and retromargin; fangs without toothlike projections, directed medially, shape normal, without prominent basal process, tip unmodified (as in fig. 2A–C); setae needlelike; paturon inner margin with pairs of enlarged setae, distal region unmodified, posterior surface unmodified, promargin unmodified, inner margin unmodified, laminate groove absent. Labium elongated hexagon, not fused to sternum (fig. 12A), same as sternum in sclerotization; subdistal portion with unmodified setae. Endites: serrula present in single row. Endites of most species modified, with lateral furrow bisecting maxilla in two sections: dorsal one flattened, bearing the serrula, and ventral one usually with anterolateral modifications, such as membranous or sclerotized expansions, or foldings (figs. 12B, 44C). Many species with more sclerotized longitudinal area adjacent to the lateral furrow (see figs. 46E, 61E, 73E). **Abdomen:** Ovoid, without long posterior extension, rounded posteriorly (fig. 12C); Dorsum without color pattern. Book lung covers large, without setae, anterolateral edge unmodified. Posterior spiracles connected by groove (figs. 12D, 94E). Pedicel tube short, unmodified, scuto-pedicel region unmodified (fig. 3B–D), plumose hairs absent, matted setae on anterior ventral abdomen in pedicel area absent, cuticular outgrowths near pedicel absent. Dorsal scutum absent, a few species with a narrow, slightly sclerotized dorsal stripe reaching near the pedicel (see below). Epigastric scutum weakly sclerotized, not surrounding pedicel, not protruding, small lateral sclerites absent. Postepigastric scutum weakly sclerotized, short, only around epigastric furrow, not fused to epigastric scutum, anterior margin unmodified, without posteriorly directed lateral apodemes. Supraanal scutum absent. Epigastric area setae uniform, dark, needlelike. Postepigastric area setae dark, needlelike. Dense patch of setae anterior to spinnerets absent. **Legs:** Without color pattern; patella plus tibia I nearly as long as carapace, tibia I unmodified (fig. 12E), tibiae III and IV with specialized, curved hairs on ventral apex, at least in *N. darwini* and *N. waorani* (figs. 6A–B, G, 12H, 95C–F), presumably in all species.

Leg spines: present, legs I–II usually with two prolateral ventral on femora, five ventral pairs on tibiae, and four or three ventral pairs on metatarsi, all spines longer than segment width. Three trichobothria on all tibiae, one on all metatarsi (as in fig. 6C, D); their bases rounded, aperture longitudinally narrowed, internal texture not gratelike, hood covered by numerous low, closely spaced ridges (as in figs. 8, 9A, 14B–D). Tarsal organ I–II with 3 sensilla visible and III–IV and palp with two (figs. 9B–F, 14E–G, 94F). Tarsi I to IV without inferior claw (as in figs. 6E, 7). **Genitalia:** Epigastric region with sperm pore not visible; furrow without Ω-shaped insertions, without setae. Palp normal size, not strongly sclerotized, right and left palps symmetrical; embolus prolateral excavation absent; trochanter normal size, unmodified; femur without posteriorly rounded lateral dilation, attaching to patella basally; patella shorter than femur, not enlarged, without prolateral row of ridges, setae unmodified; cymbium not extending beyond distal tip of bulb, plumose setae absent, without stout setae, without distal patch of setae. Bulb variable, slender, elongated, or piriform; distal part with a more or less forwardly directed conductor with a narrow basal opening on its prolateral side (figs. 15C–F, 44D–E); this opening probably discharges the internal vesicle of the conductor. Longitudinal, internal tendon observed in most species (see details in fig. 15E, G), as previously reported for other haplogynes (Huber, 2004: 366); internal tracheoles present (at least in *N. darwini*, fig. 15E, G). Some species (the *poguazu* group) with small, translucent conductor, and additional ventroapical, sclerotized projection (figs. 69B, D, 76B, D).

FEMALE: As in male except as noted. **Cephalothorax:** Mouthparts: endites distally not excavated, anteromedian tip unmodified. Palpal claw absent (figs. 4E, 32A–B); spines absent; tarsus unmodified, patella without prolateral row of ridges. **Abdomen:** Dorsal scutum always absent. Epigastric scutum without lateral joints. **Legs:** Trichobothria and claws examined in detail only in *N. darwini* (figs. 7, 8): superior tarsal claws with inner faces striate; tarsus I proclaw with two teeth on median surface, retroclaw with four teeth on lateral surface; tarsus II proclaw with four teeth on lateral surface, retroclaw with four teeth on lateral surface; tarsus III proclaw with four teeth on lateral surface, retroclaw with four teeth on lateral surface; tarsus IV proclaw with four teeth on lateral surface, retroclaw with four teeth on lateral surface. **Genitalia:** Genital opening connecting to uterus externus, from which two elements emerge: anterior receptacle and posterodorsal plate. Between them, genital opening delimited by two transverse sclerotized ridges (e.g., fig. 10). Posterior ridge arising from base of posterodorsal plate, its anterior margin forming locking mechanism with anterior transverse ridge (complementary V- or U-shape visible in cleared preparations; see figs. 10, 40A, C, E, 53A, C, E). Some species with transverse ridges less conspicuous (e.g., figs. 69E, 76C, 99C). Anterior receptacle with accessory glands (fig. 10f), and two sets of paired muscles attached: one pair anteroventrally (presumably connecting to ventral cuticle), and one pair to lateral projections of posterior transverse ridge (figs. 10e, g). Opening of the receptacle in anterior transverse ridge (fig. 10h); terminal part of uterus externus sometimes visible in digested preparations as longitudinal (figs. 69a, 76a, c, 99a, c, e), or transverse (figs. 86c) slit. Anterior receptacle usually visible ventrally by transparence. Posterodorsal plate nearly oval, usually covering entirely anterior receptacle in dorsal view.

DISTRIBUTION: Probably all tropical, subtropical, and temperate South America and Panama, excluding Chile. Not reported yet from the Guianas.

SPECIES GROUPS: The species discussed below are preliminarily assigned to four species groups (*darwini*, *nigromaculatus*, *poguazu*, and *platnicki*) for convenience in identification. Some of the characters defining those groups may be synapomorphies, although this topic will be discussed after the revision of the Brazilian fauna and similar undescribed genera from South America is completed.

The *darwini* Group

DIAGNOSIS: Copulatory bulb of males elongated, with the embolus accompanied

by only a single, forwardly directed, nearly straight conductor, without additional distal apophysis. Tarsi I–II of females much shorter than the metatarsi, which have four pairs of ventral macrosetae (as in fig. 4F–G).

This group includes the type species and the closely related *N. tucumanus*; it seems to be restricted to the southern part of the distributional range of the genus, in Argentina and adjacent Uruguay.

Neotrops darwini, new species
Figures 1–19, 26A–B; map 1

TYPES: Male holotype from Argentina: Ciudad Autónoma de Buenos Aires: Reserva Ecológica Costanera Sur, Canal de Viamonte, −34.60458°, −58.35008°, Sept. 15, 2008, A. Mamani, P. Turienzo (MACN-Ar 21925 PBI_OON 14971); same reserve, *Tessaria integrifolia* forest, −34.60444°, −58.35000°Apr. 13, 2009, A. Mamani, L. Zapata, 1 female paratype (MACN-Ar 21604 PBI_OON 14957), same locality, Oct. 27, 2008, A. Mamani, 1 male paratype (MACN-Ar 23585 PBI_OON 15010), 1 male and 2 female paratypes (MACN-Ar 26077 PBI_OON 30641), all deposited in MACN-Ar.

ETYMOLOGY: This specific epithet is a patronym in honor of Charles Darwin (1809–1882), in commemoration of the recent 150th anniversary of the publication of *On the Origin of Species* and the 200th anniversary of his birth. A substantial and fruitful part of Darwin's expedition took place in Argentina.

DIAGNOSIS: *N. darwini* males are very similar to those of *N. tucumanus* by the elongated bulb, but differ by the embolus being more strongly curved, and the conductor slightly bent upward at the apex and distally widened (fig. 26B). Females also resemble to those of *N. tucumanus* but the anterior receptacle is distally widened (fig. 26A).

DESCRIPTION: MALE (holotype, PBI_OON 14971).Total length 1.74. **Cephalothorax:** Carapace pale orange, ovoid in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to between 0.5 and 0.75 times its maximum width, cuticle surface with small platelets (as in fig. 3A), iridescent under light microscope; lateral margin undulate; nonmarginal pars cephalica setae absent; nonmarginal pars thoracica setae dark, needlelike; marginal setae dark, needlelike. Clypeus setae present, dark, stout, many stout erect setae reaching the ocular area. Eyes on a dark area, ALE largest, circular, PME oval, PLE oval; posterior eye row almost straight from front and recurved from above; ALE separated by more than their diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius (fig. 11C). Sternum longer than wide, yellow, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV; setae sparse, evenly scattered (fig. 11B). Mouthparts: chelicerae, endites, and labium yellow, cheliceral setae light, evenly scattered. Labium anterior margin indented at middle, with six or more setae. Endites distally not excavated, with a lateral expansion, membranous, with scalelike microsculpture, with a bunch of modified setae directed inward (fig. 12B). **Abdomen:** Dorsum white. Epigastric and postepigastric area with dark, needlelike setae. Postepigastric scutum yellow. Spinneret scutum absent. Dorsum with dark, needlelike setae. Colulus represented only by setae. Spinnerets (fig. 13C–F): ALS: one major ampullate gland spigot and three piriform ones; PMS: with three spigots; PLS: with four spigots. **Legs:** Yellow; femur IV not thickened, same size as femora I–III, tibia IV with specialized hairs on ventral apex (fig. 12H). Leg spination: leg I: femora d1-1, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora d1-1, pv0-0-0-0-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2, leg III: femora d1-1, tibiae d1, p1-1, v1ap, metatarsi p1-1, v1-1ap; leg IV: femora d1-1-1, tibiae d1, p1-1, r1-1, v1ap, metatarsi d1-0-1, p1-1, r1-1, v1-1ap. Tarsal organ (only those examined under SEM are reported): I with three sensilla, IV and palp, both with two sensilla visible (fig. 14E–G). **Genitalia:** Palp (figs. 15, 17B–D, 20B): proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, not fused with bulb; bulb pale orange, more than two times as long as cymbium, slender, elongated, distal part with a forward-directed conductor, slightly curved apically, a flattened tip, and a narrow basal opening on its prolateral side (fig. 15C–F),

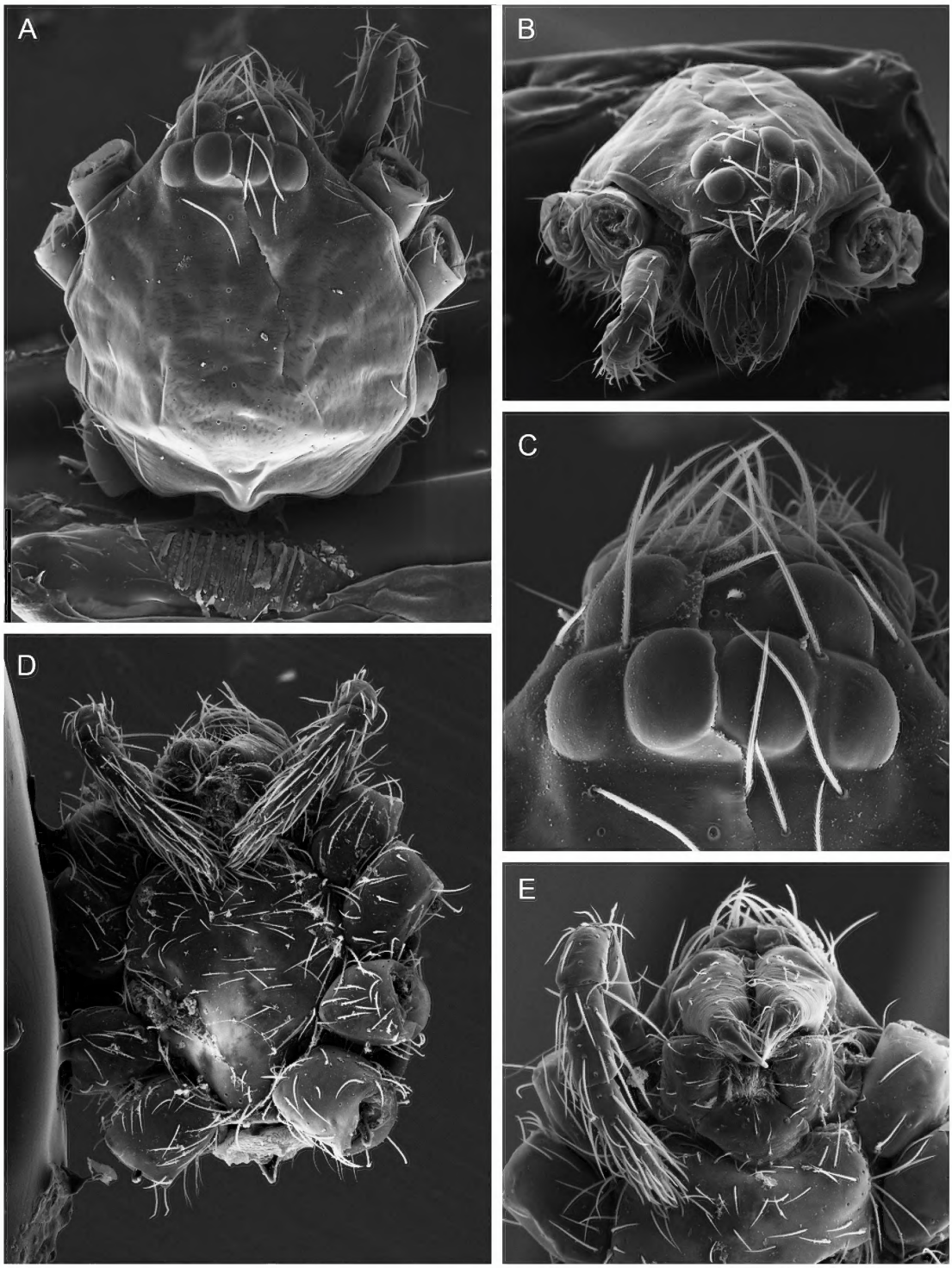


Fig. 1. *Neotrops darwini*, new species, female. **A–C, E** (PBI_OON 14976), **D** (PBI_OON 15008). **A.** Carapace, dorsal view. **B.** Same, anterior view. **C.** Ocular region, dorsal view. **D.** Cephalothorax, ventral view. **E.** Mouthparts, ventral view.

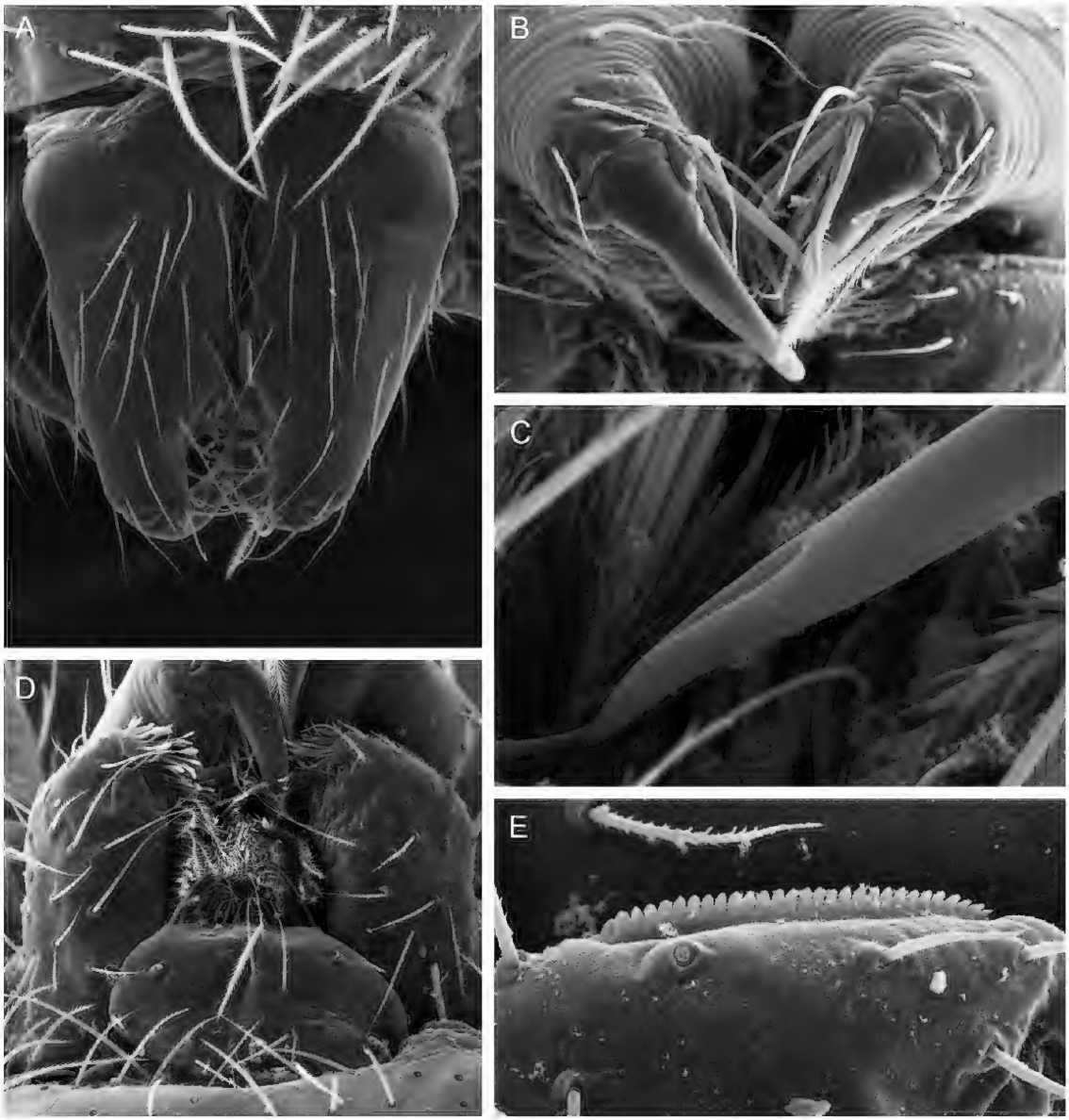


Fig. 2. *Neotrops darwini*, new species, female (PBI_OON 14976). **A.** Chelicerae, anterior view. **B.** Same, ventral view. **C.** Same, detail of the venom outlet. **D.** Endites and labium, ventral view. **E.** Serrula, ventral view.

probably for discharging the internal vesicle of the conductor. Embolus light; strongly curved, with a flattened opening (fig. 15F).

FEMALE (paratype, PBI_OON 14957). Total length 2.10. As in male except as noted. **Cephalothorax:** Carapace broadly oval in dorsal view, cuticle surface with small platalets (fig. 3A) and with iridescence under light microscope. Stout clypeal setae not as erect as in male. Eyes: ALE, PME subequal, larger than PLE; ALE separated by their radius to diameter (fig. 1C). **Abdomen:** Epigastric and postepigastric area setae dark, needlelike. Spinnerets (fig. 4A–D): ALS: with one major ampullate gland spigot and four piriform ones; PMS: with 10 spigots; PLS:

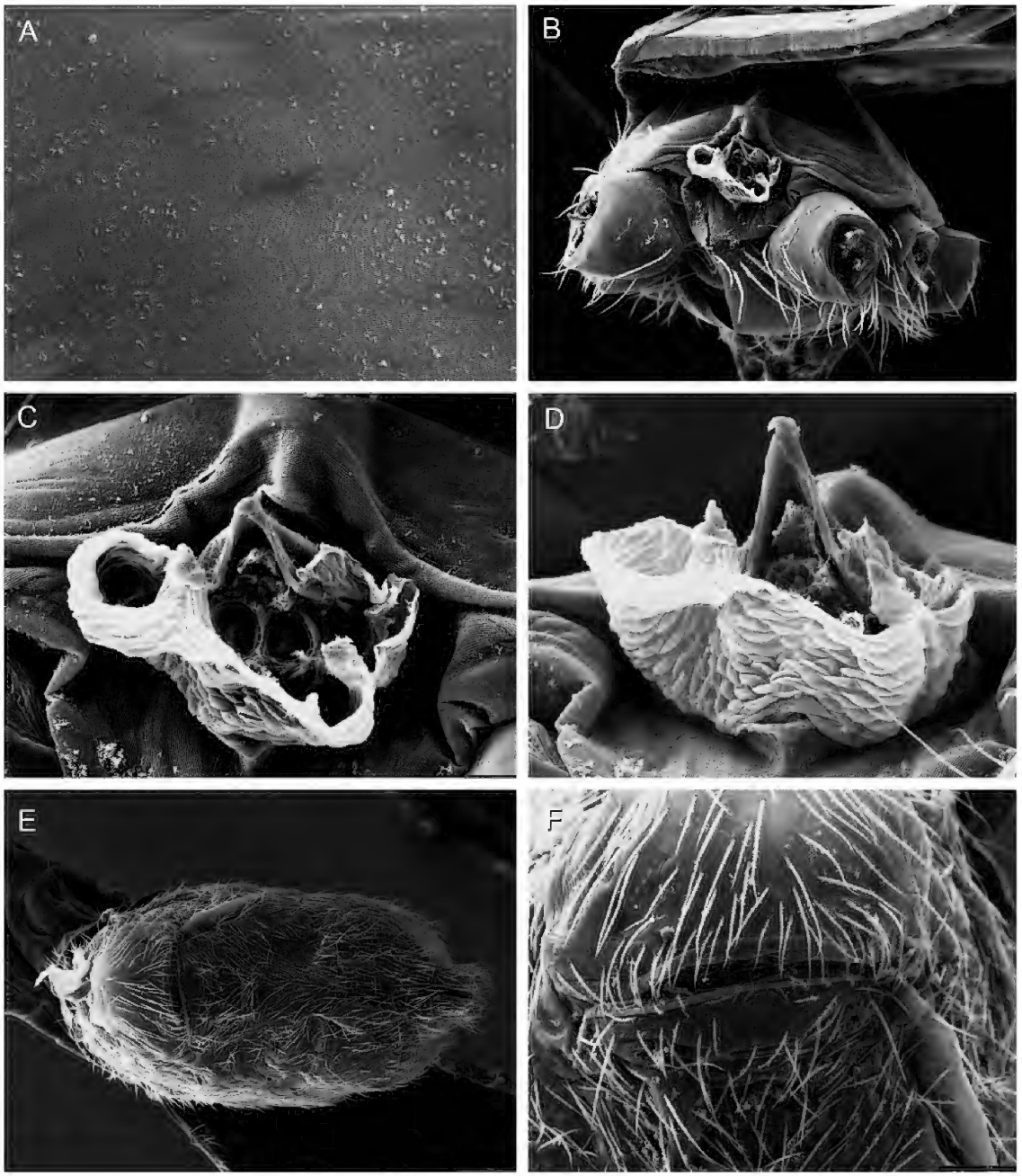


Fig. 3. *Neotrops darwini*, new species, female **A–D.** (PBI_OON 14976), **E–F.** (PBI_OON 23584). **A.** Platelets on carapace, dorsal view. **B.** Cephalothorax, posterior view. **C.** Pedicel, posterior view. **D.** Same, ventral view. **E.** Abdomen, ventral view. **F.** Epigastric region, ventral view.

with 14 spigots. **Legs:** Patella plus tibia I nearly as long as carapace, tibiae III and IV with specialized setae ventroapically (fig. 6A–B). Leg spination (fig. 5A, C, D): leg I: femora d1-1, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora d1-1, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2, leg III: femora d1-1, tibiae d1, p1-1, r1, v2ap,

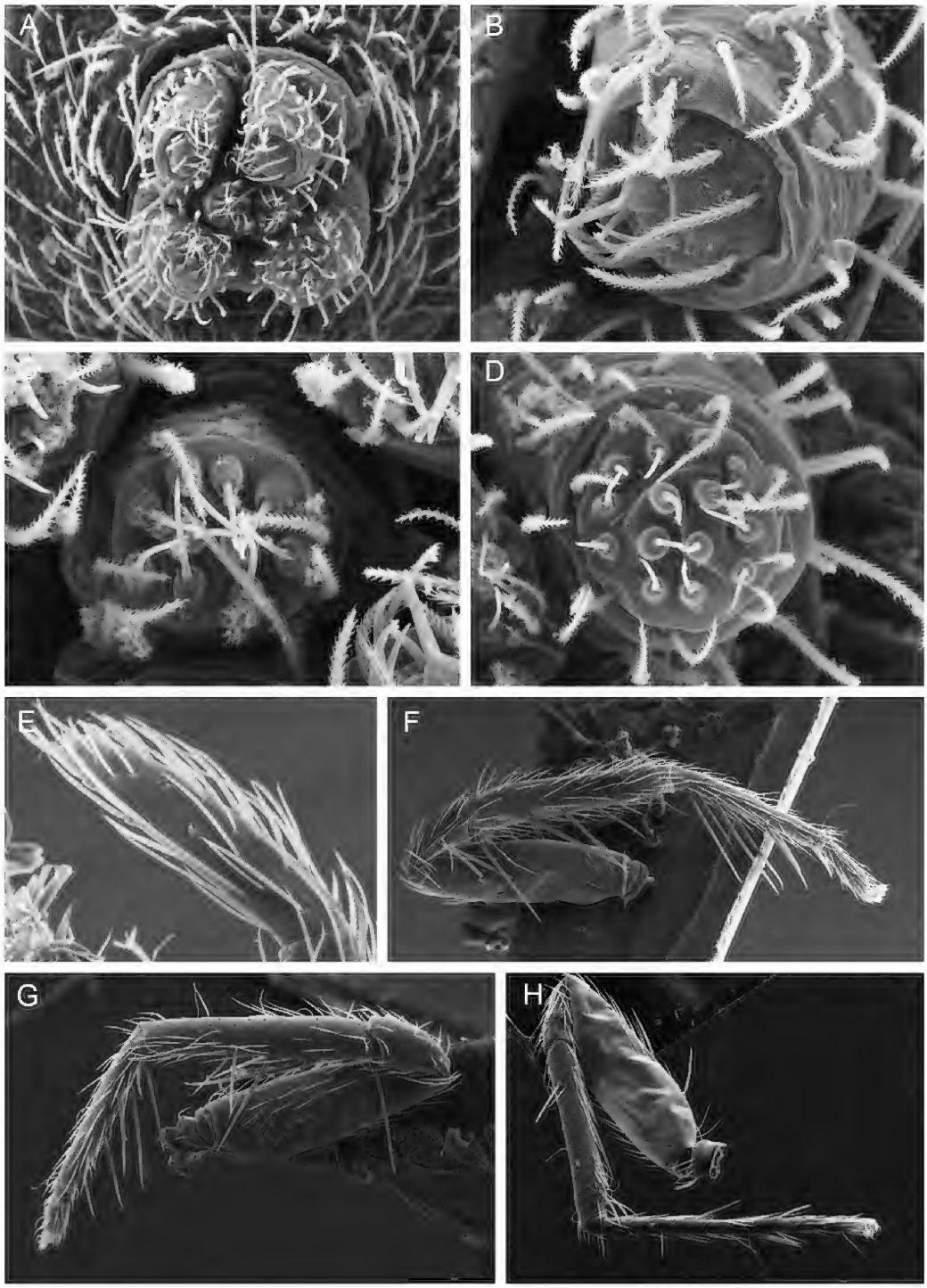


Fig. 4. *Neotrops darwini*, new species, female. **A–D.** (PBI_OON 23584), **E–H.** (PBI_OON 14976). **A.** Spinnerets, posteroventral view. **B.** Same, anterior lateral spinneret. **C.** Same, posterior median spinneret. **D.** Same, posterior lateral spinneret. **E.** palp, retrolateral view. **F.** Leg I, prolateral view. **G.** Leg II, prolateral view. **H.** Leg IV, retrolateral view.

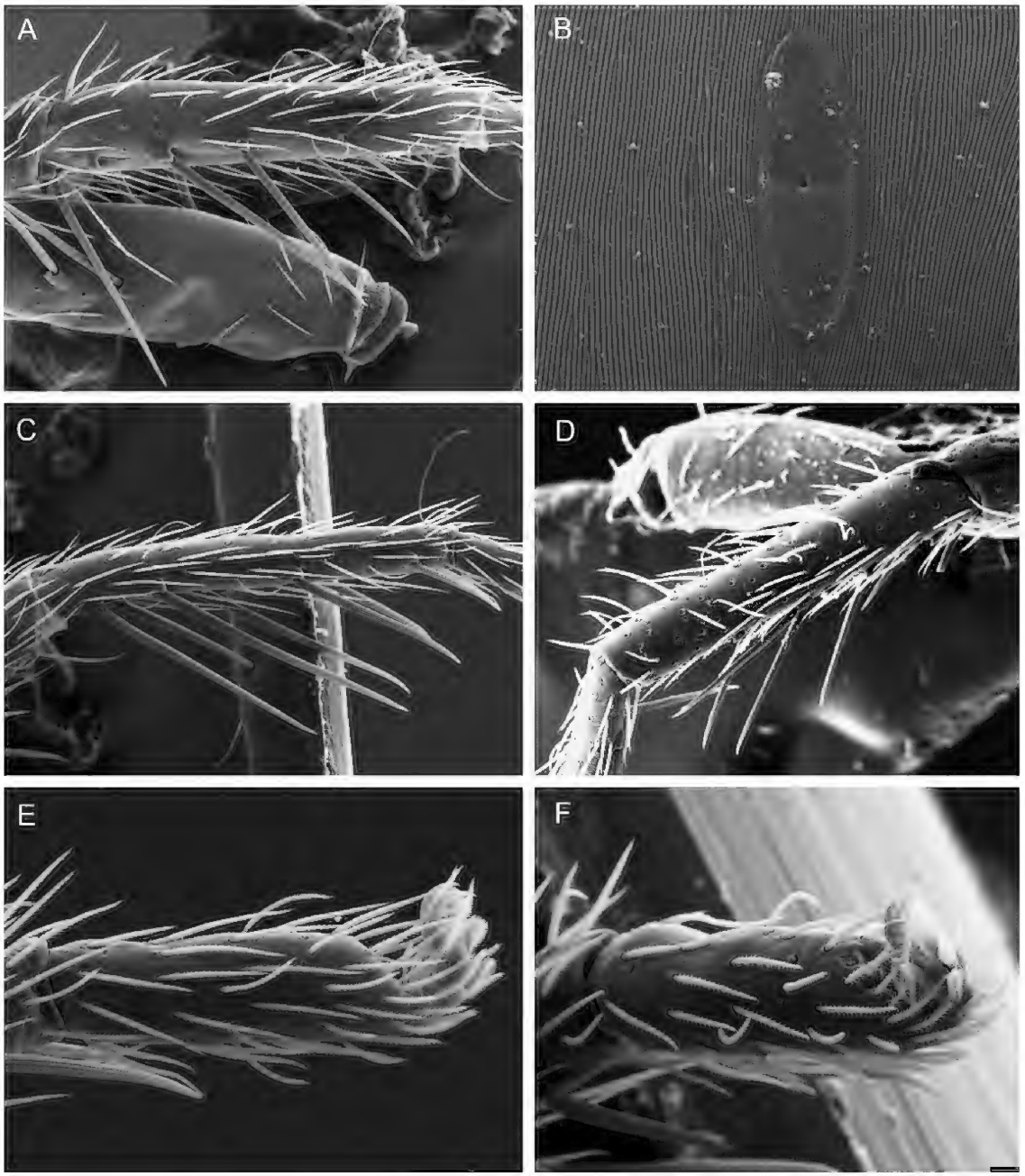


Fig. 5. *Neotrops darwini*, new species, female **A–C, E–F.** (PBI_OON 14976), **D** (PBI_OON 15008). **A.** Tibia I, prolateral view. **B.** same, platelet with pore. **C.** Metatarsus I, prolateral view. **D.** Tibia I, dorsal view. **E.** Tarsus I, prolateral view. **F.** Same, anterior view.

metatarsi p1-1, v1-2ap; leg IV: femora d1-1-1, tibiae d1, p1-1, r1-1, v1-2ap, metatarsi d1-0-1, p1-1, v0-1-1-2ap. Tarsus I superior claws with four teeth on lateral surface of proclaw. Tarsal organ legs I–II with three sensilla, III–IV and palp with two sensilla visible (fig. 9B–F). **Genitalia:** Ventral view: anterior receptacle with rounded tip, visible through

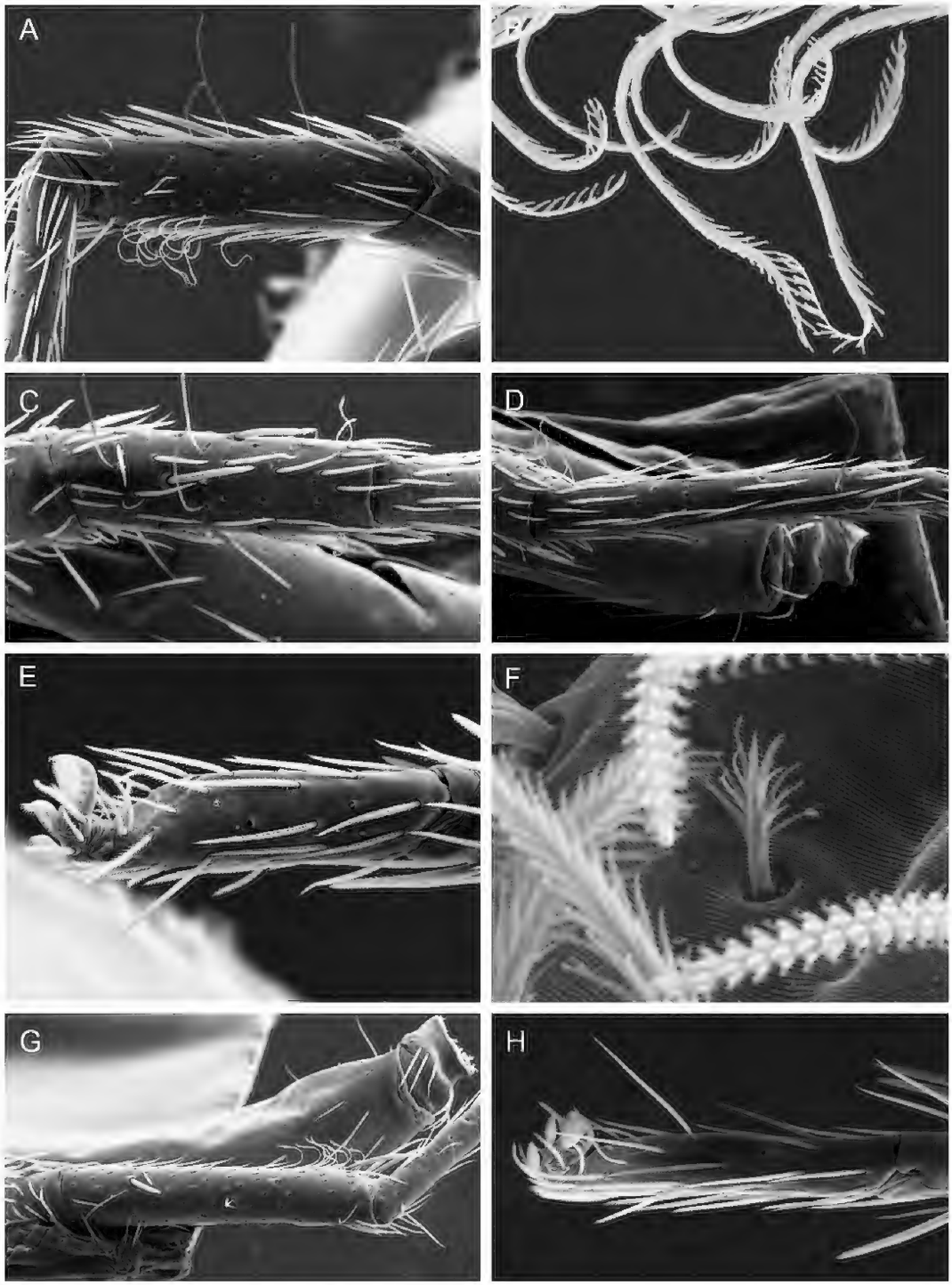


Fig. 6. *Neotrops darwini*, new species, female (PBI_OON 14976) **A–C.** Tibia III. **A.** Retrolateral view. **B.** Same, detail of modified setae on the ventral apex. **C.** Same, dorsal view. **D.** Metatarsus III, dorsal view. **E.** Tarsus III, retrolateral view. **F.** Same, detail of sensory seta. **G.** Tibia IV, dorsal view. **H.** Tarsus IV, retrolateral view.

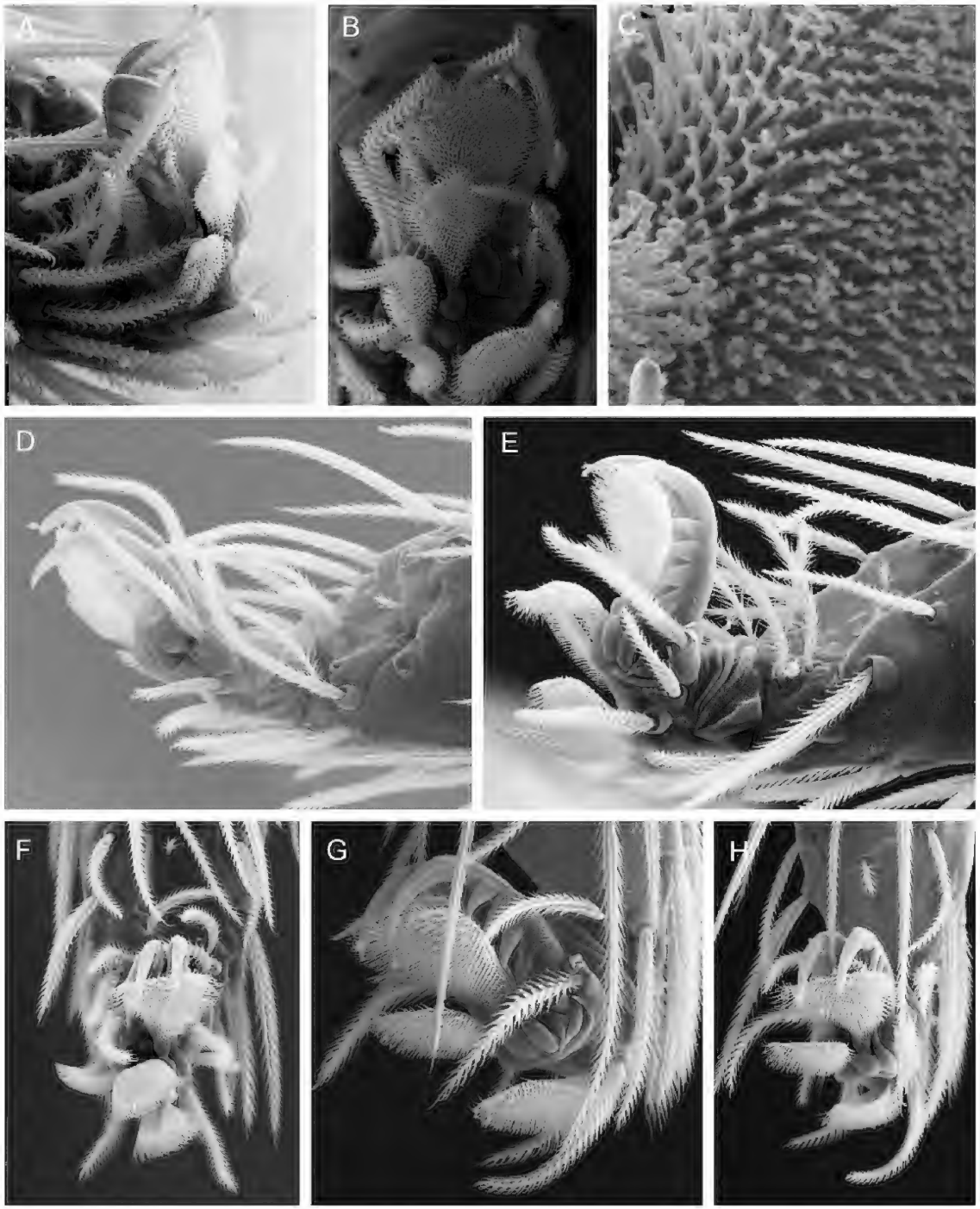


Fig. 7. *Neotrops darwini*, new species, female tarsal claws (PBI_OON 14976). **A–C.** Leg I. **A.** Claws, rolateral view. **B.** Same, anterior view. **C.** Same, detail of tenent surface of hair of the claw tuft. **D.** Leg II, claws, prolateral view. **E–F.** Leg III. **E.** Claws, retrolateral view. **F.** Same, anterior view. **G–H.** Leg IV. **G.** Claws, retrolateral view. **H.** Same, oblique anterior view.

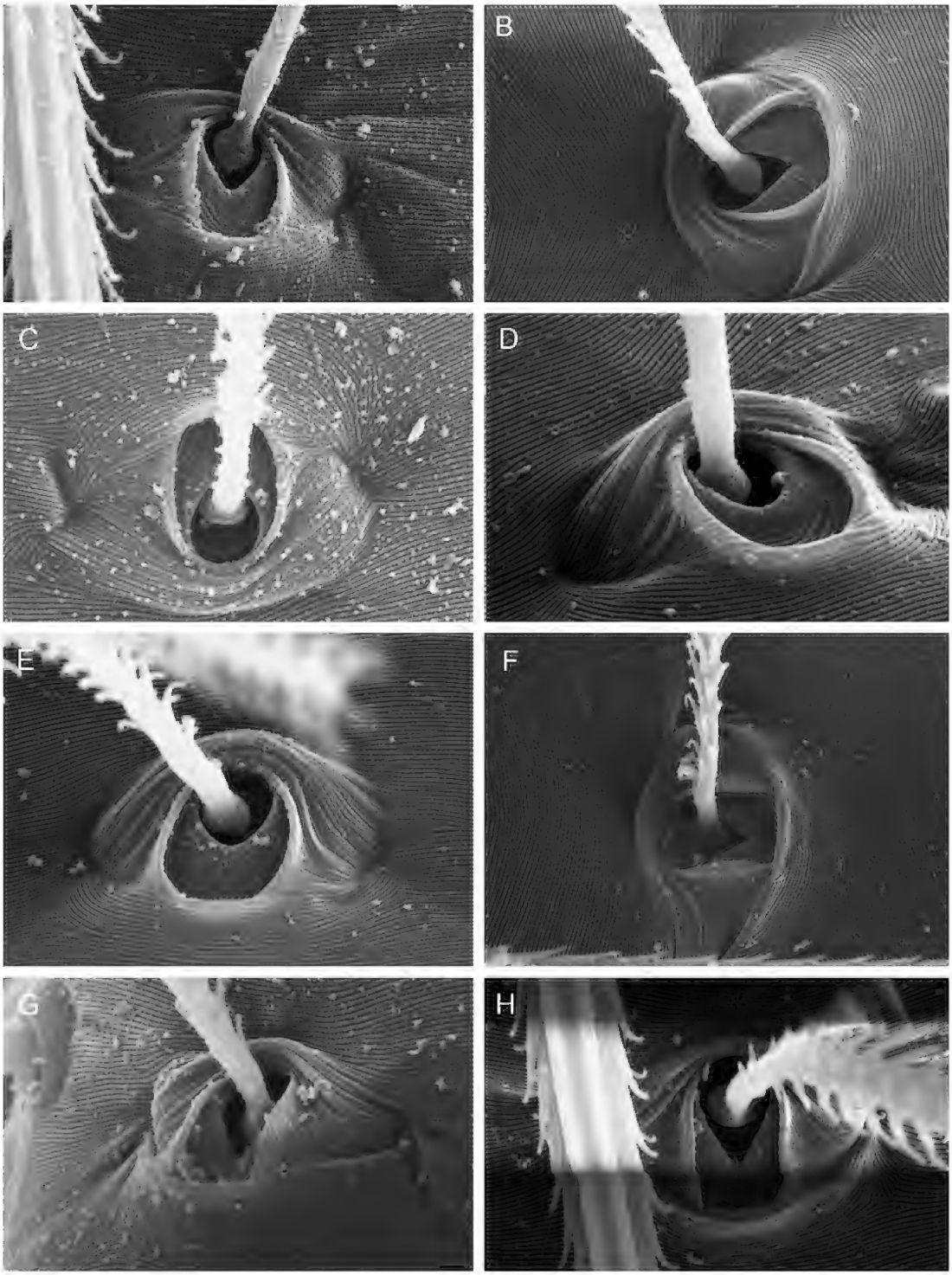


Fig. 8. *Neotrops darwini*, new species, female trichobothria (PBI_OON 14976). **A.** Palpal tibia. **B.** Tibia I. **C.** Tibia II. **D.** Tibia III. **E.** Tibia IV. **F.** Metatarsus I. **G.** Metatarsus II. **H.** Metatarsus III.

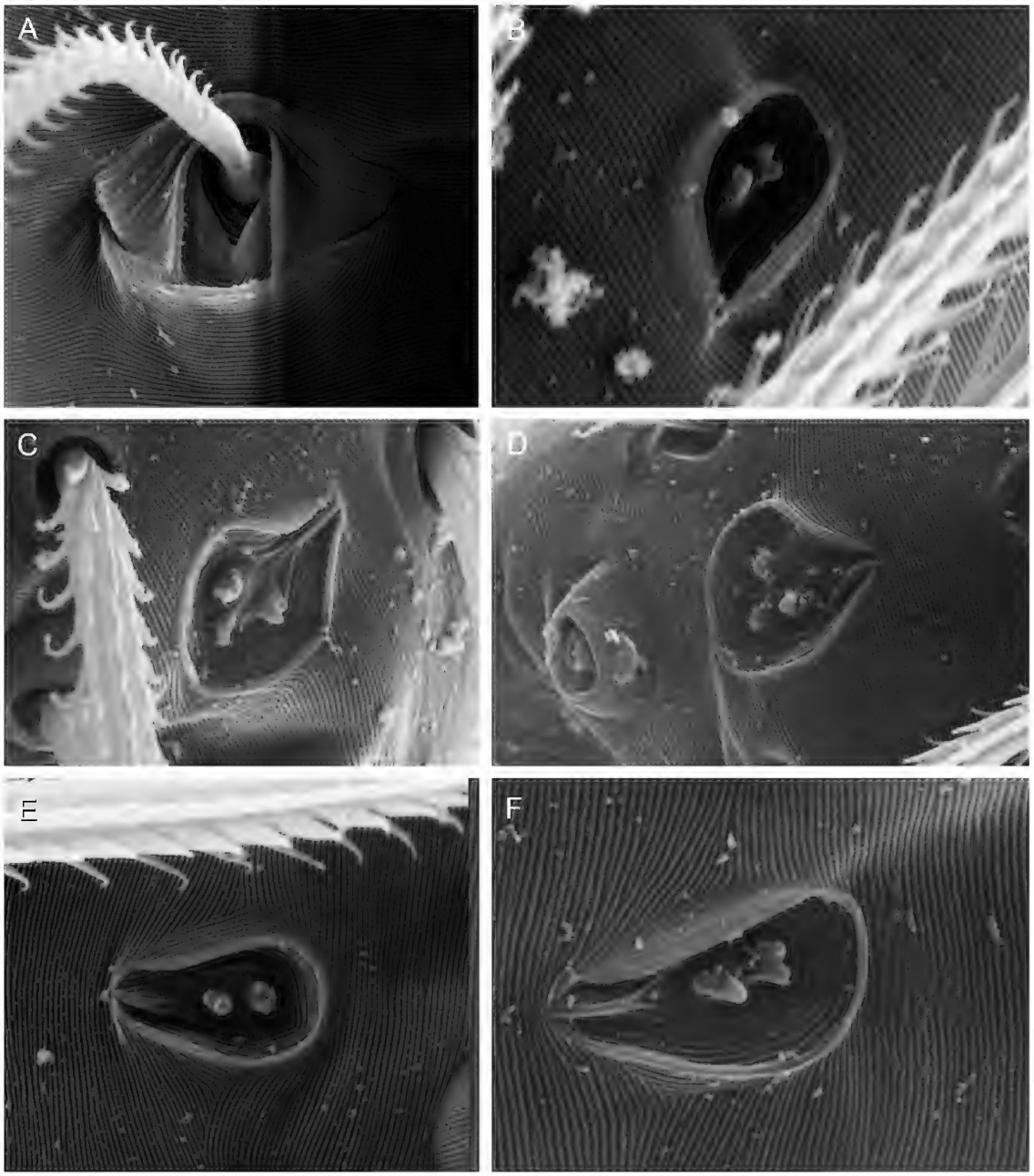


Fig. 9. *Neotrops darwini*, new species, female trichobothria and tarsal organs (PBI_OON 14976). **A.** Trichobothrium on metatarsus IV. **B–F.** Tarsal organs. **B.** Palp. **C.** Leg I. **D.** Leg II. **E.** Leg III. **F.** Leg IV.

cuticle (fig. 18H). Dorsal view: anterior receptacle gradually widened anteriorly, with accessory glands along its base (fig. 10B, F). Posterior plate nearly oval (fig. 10A, C, E), transversal, not covering totally the anterior receptacle in dorsal view.

OTHER MATERIAL EXAMINED: **ARGENTINA: Chaco:** 100 km (the label says 1000!) NW Resistencia, Chaco NP, Dec. 12, 1990, to Dec. 17, 1990, S. J. Peck, 1♂ (AMNH PBI_OON 1862). **Corrientes:** Capital: Bella Vista, Dec. 22, 2005, Ávalos and Rubio G.,

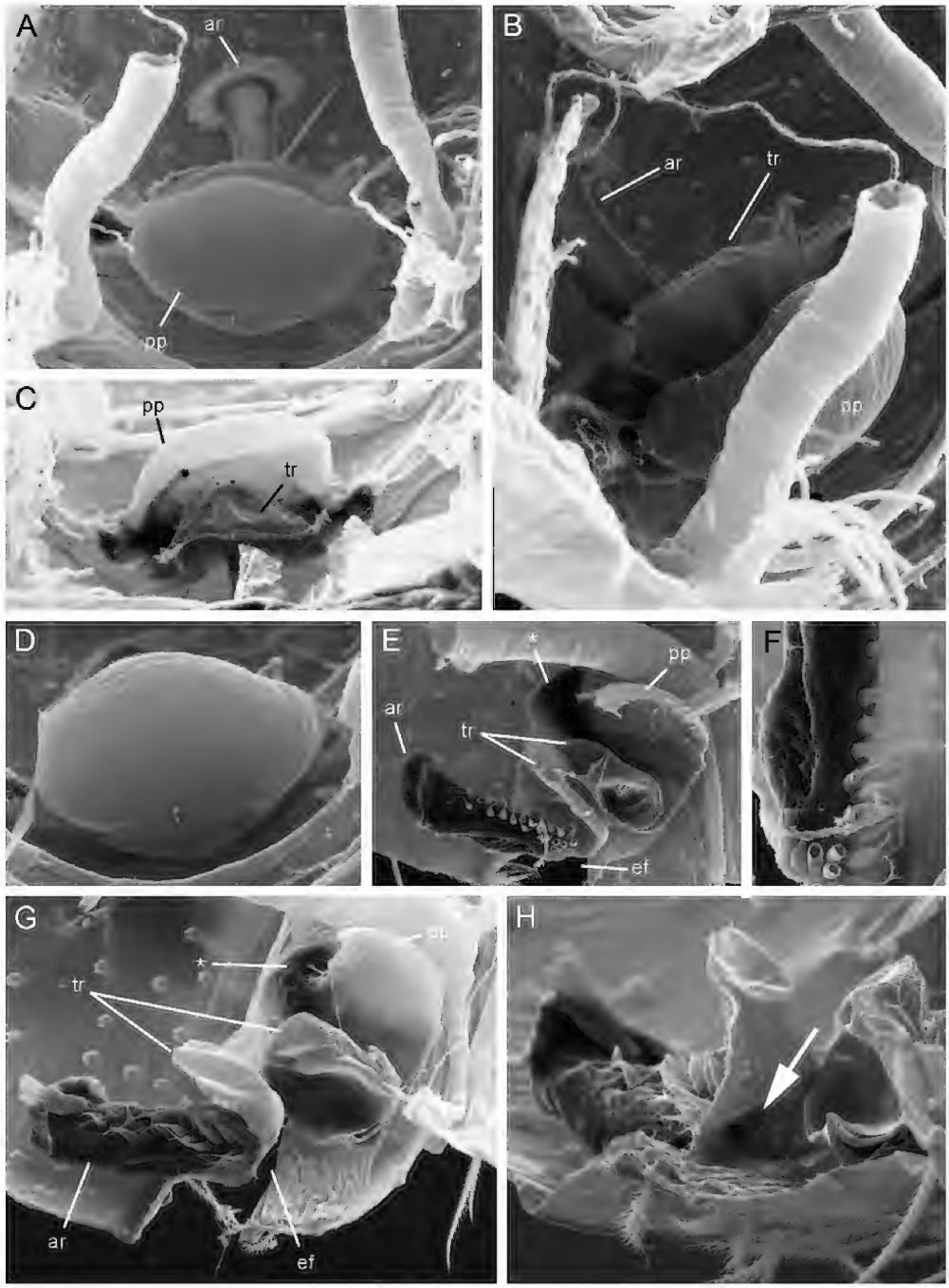


Fig. 10. *Neotrops darwini*, new species, female genitalia (**A–D**, PBI_OON 14976, **E–H**, PBI_OON 42013). **A.** Dorsal view. **B.** Same, oblique lateral view. **C.** Same, anterior view. **D.** Detail of the posterodorsal plate, posterior view. **E–H.** Longitudinal sections (right halves, lateral view). **F.** Detail of the glands of the anterior receptacle, lateral view. **G.** Another specimen with transverse ridges slightly separated, showing the anterior-posterior locking area. **H.** Same, slightly inclined to show the orifice of the anterior receptacle (arrow). Abbreviations: **ar**, anterior receptacle; **ef,** epigastric furrow; **pp**, posterodorsal plate; **tr,** transverse ridge; asterisk (*) = lateral projection.

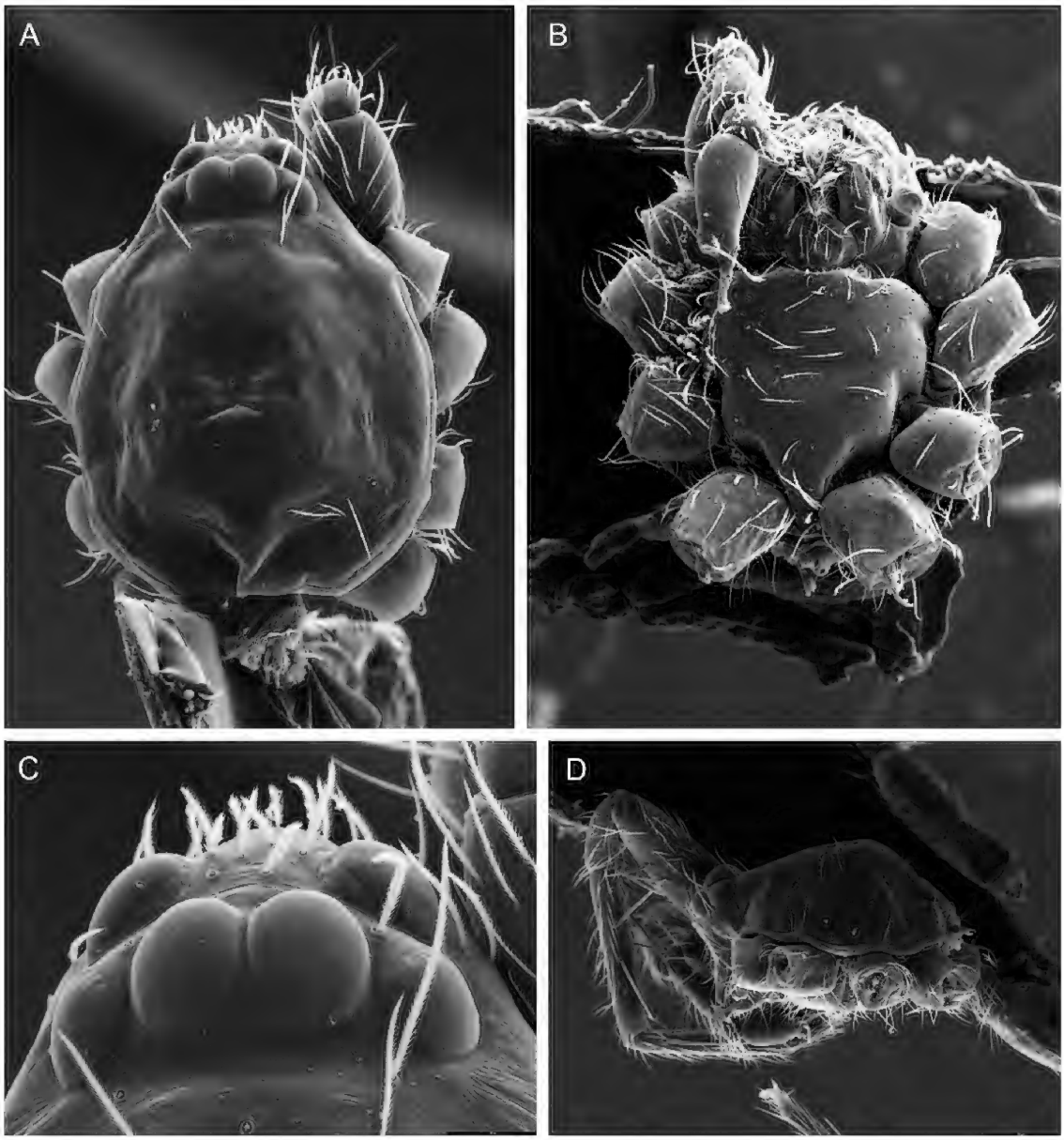


Fig. 11. *Neotrops darwini*, new species, male. (**A, C,** PBI_OON 14977, **B, D,** PBI_OON 15008). **A.** Carapace, dorsal view. **B.** Cephalothorax, ventral view. **C.** Ocular region, dorsal view. **D.** Cephalothorax, lateral view.

1♂ (CARTROUNNE PBI_OON 15029). **Entre Ríos:** Departamento Colón: Parque Nacional El Palmar: −31.86534° −58.23745°, stones, in grassland with palms and low forest, 22 m, Aug. 06, 2011, to Aug. 08, 2011, Ramírez et al., MACN-Ar, 1♂ (MACN-Ar 27994 PBI_OON 42107), 2♂ (MACN-Ar 27996 PBI_OON 42120); same collectors, Arroyo El Palmar, −31.893078° −58.238468°, stones and grassland with palms and riparian forest; 10 m, Aug. 07, 2011, 1♂ (MACN-Ar 28161 PBI_OON 42004); same collectors, −31.893078° −58.238468°, stones and grassland with palms and riparian

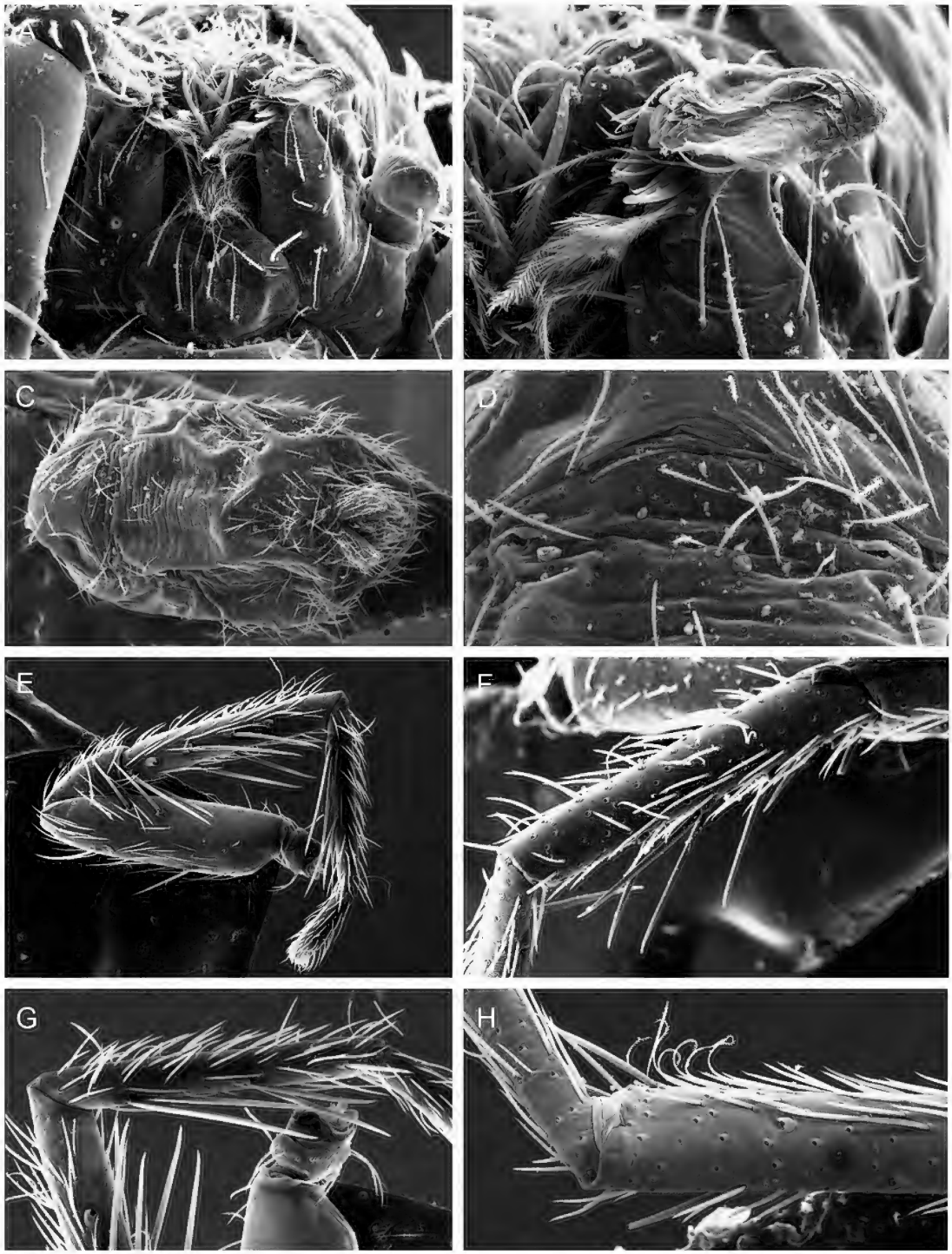


Fig. 12. *Neotrops darwini*, new species, male. (**A–D, F,** PBI_OON 15008, **E, G–H,** PBI_OON 14977). **A.** Mouthparts, ventral view. **B.** Detail of the tip of the left endite, ventral view. **C.** Abdomen, ventral view. **D.** Epigastric region, ventral view. **E.** Leg I, prolateral view. **F.** Metatarsus I, dorsal view. **G.** Same, prolateral view. **H.** Tibia IV, distal part, retrolateral view.

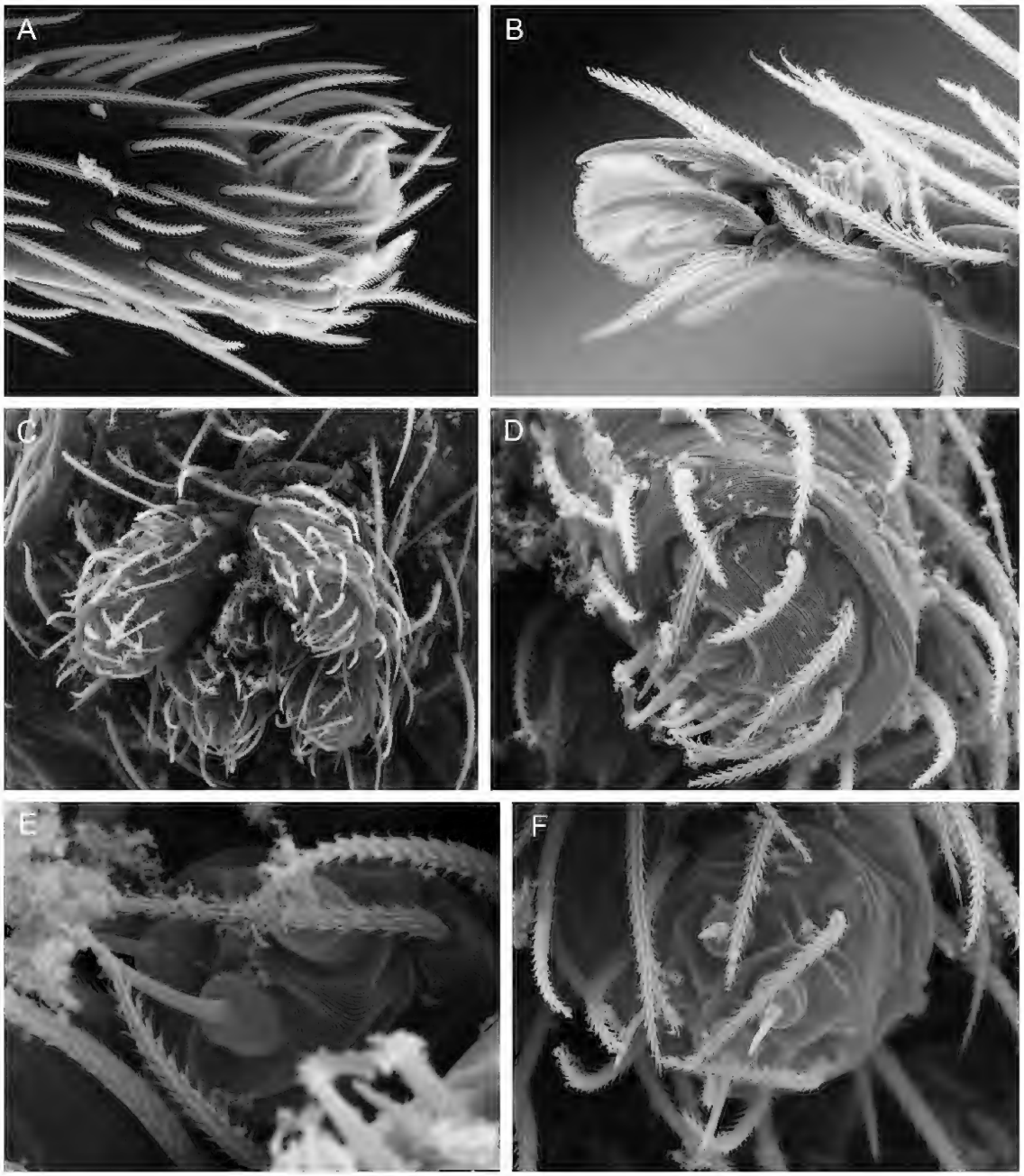


Fig. 13. *Neotrops darwini*, new species, male. (**A,** PBI_OON 14977, **B–F,** PBI_OON 15008). **A.** Leg I, tarsal claws, prolateral view. **B.** Leg IV, tarsal claws, dorsal view. **C.** Spinnerets, ventral view. **D.** Anterior lateral spinneret. **E.** Posterior median spinneret. **F.** Posterior lateral spinneret.

forest, 10 m, Aug. 07, 2011, 1♀ (MACN-Ar 27987 PBI_OON 42119); same collectors, −31.88461° −58.23927°, flooded grassland, in *Panicum prionitis*, 24 m, Aug. 07, 2011, 1♂, 1 juvenile (MACN-Ar 28162 PBI_OON 42007); same collectors, −31.86539° −58.24008° (flooded grassland, in grassy tussocks and *Cortaderia*), 28 m, Aug. 07, 2011, to Aug. 08, 2011,

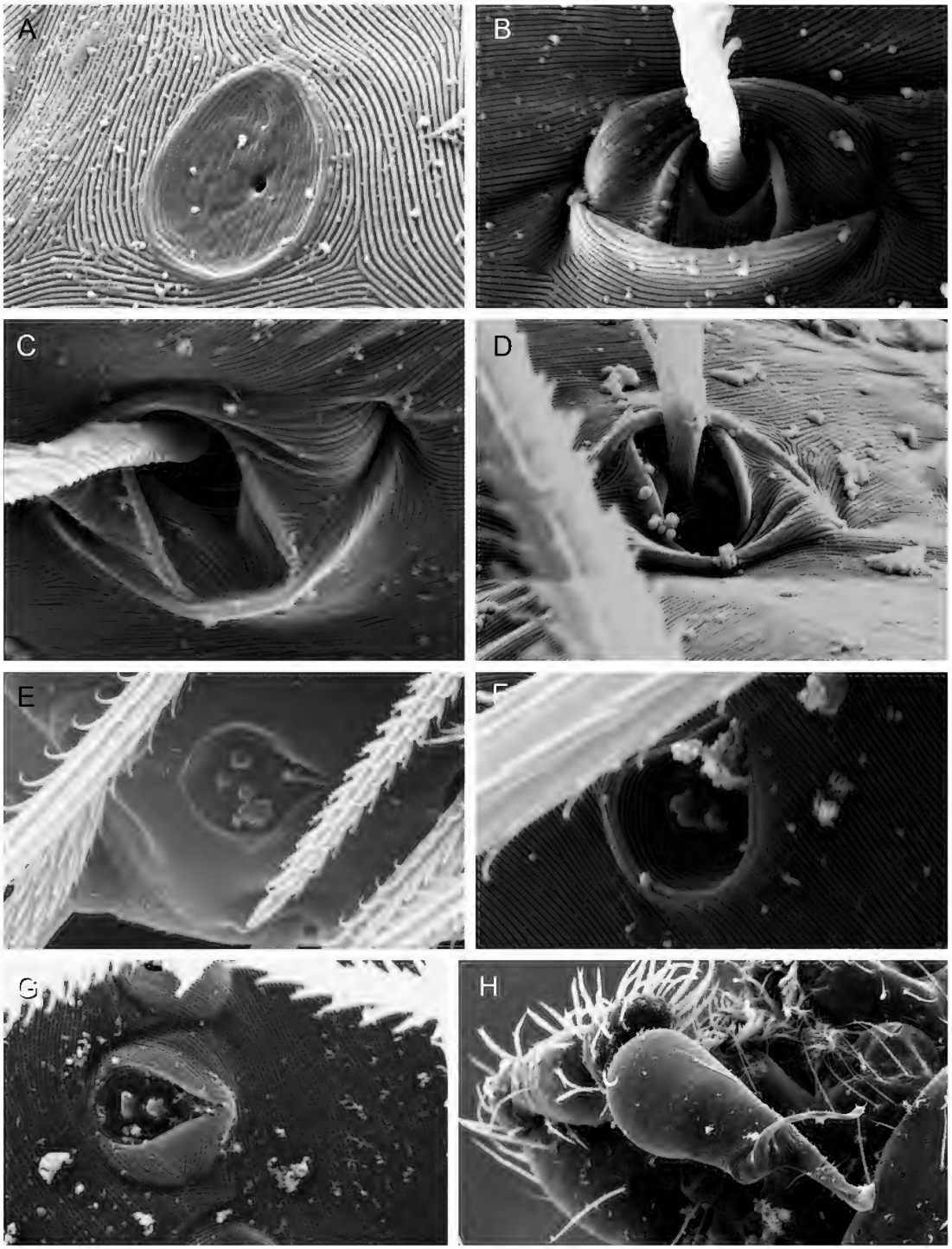


Fig. 14. *Neotrops darwini*, new species, male. (**A–D, F, H,** PBI_OON 15008, **E,** PBI_OON 14977, **G,** PBI_OON 14969). **A.** Leg IV, platelet on metatarsus. **B–D.** Trichobothria. **B.** Tibia II. **C.** Metatarsus IV. **D.** Metatarsus II. **E–G.** Tarsal organs. **E.** Leg I. **F.** Leg IV. **G.** Palp. **H.** Male palp, oblique retrolateral view.

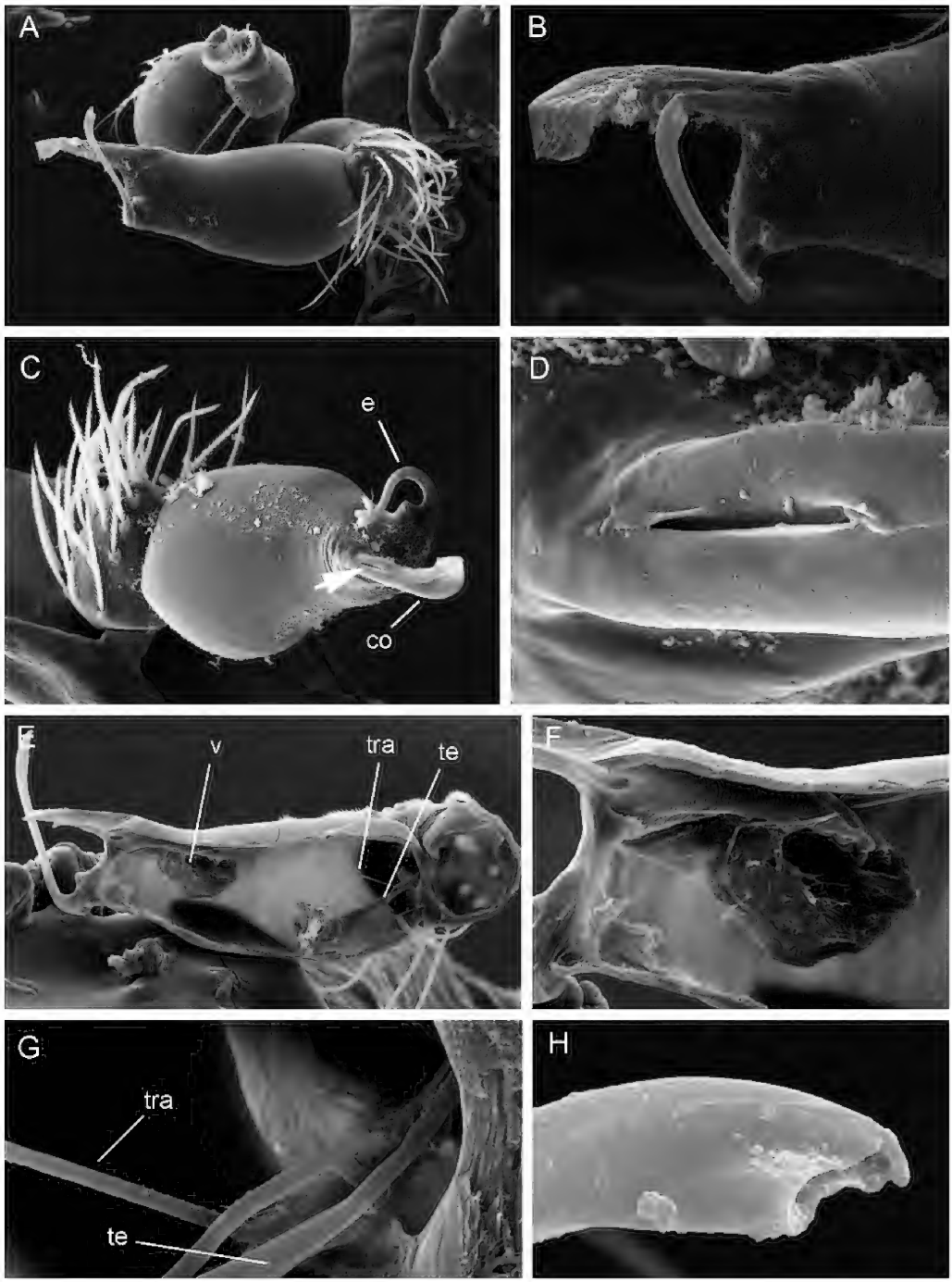


Fig. 15. *Neotrops darwini*, new species, male. (**A, B, H,** PBI_OON 14969, **C–D,** PBI_OON 14940, **E–G**, PBI_OON 42013). Male palp. **A.** Dorsal view. **B.** Same, detail of embolus and conductor. **C.** Same, apical view (arrow to slit on the base of conductor). **D.** Detail of the slit on the base of conductor. **E.** Longitudinal section of the bulb, dorsal view. **F.** Detail of the vesicle of the conductor. **G.** Detail of the internal basal part of the bulb. **H.** Embolus tip. Abbreviations: **co,** conductor; **e,** embolus; **te,** tendon; **tra,** tracheole; **v,** vesicle of the conductor.

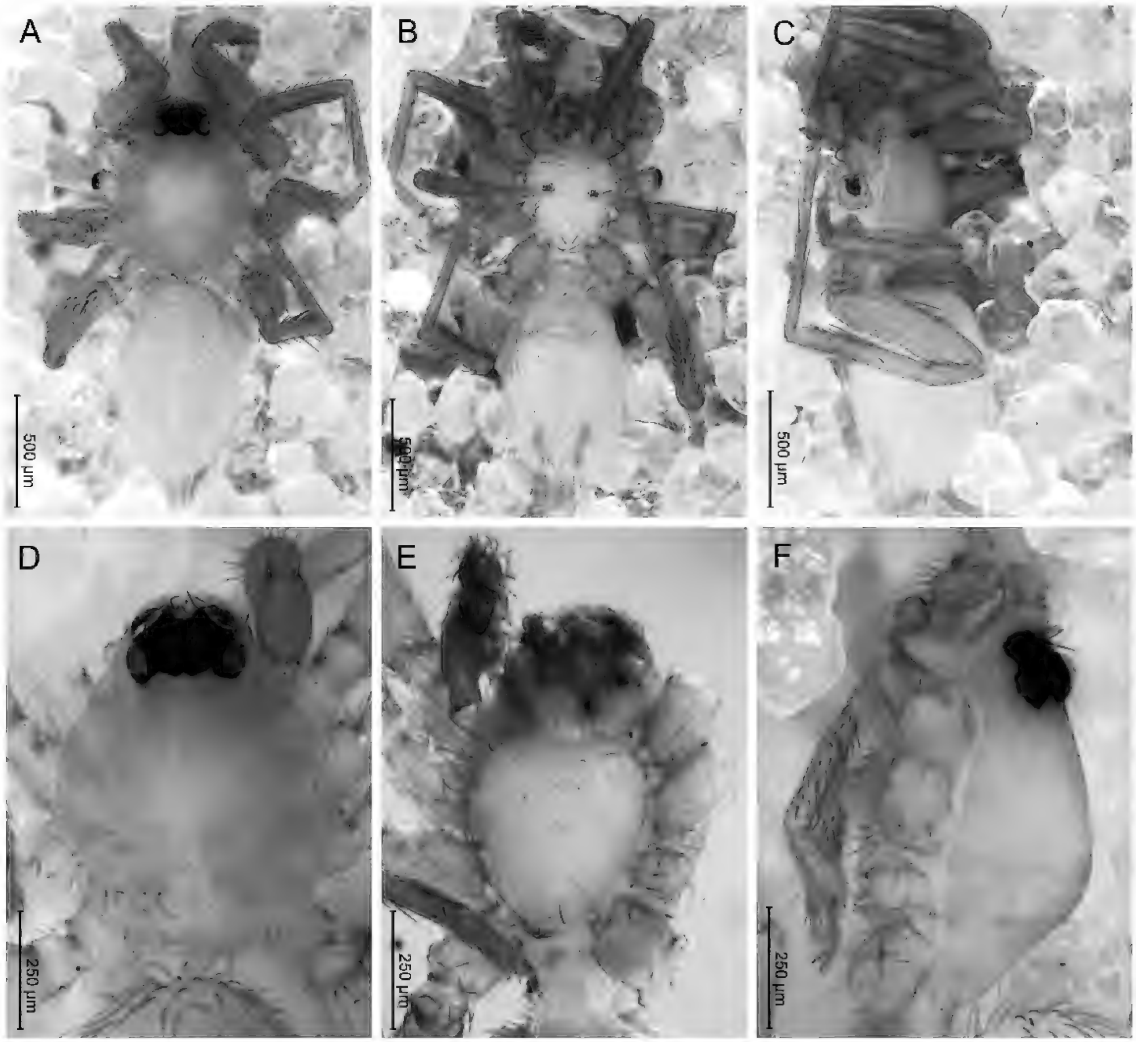


Fig. 16. *Neotrops darwini*, new species, male. (**A–C,** PBI_OON 14971, **D–F,** PBI_OON 14799). **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

1♀ (MACN-Ar 28158 PBI_OON 42001), 2♂, 2 juvenile (MACN-Ar 28157 PBI_OON 42005), 1♀, 7 juvenile (MACN-Ar 28010 PBI_OON 42008), 1♀ (MACN-Ar 28012 PBI_OON 42009), 1♀ (MACN-Ar 28011 PBI_OON 42010), 1♀, 2♂ (MACN-Ar 28013 PBI_OON 42011), 6♀, 1♂ (MACN-Ar 28006 PBI_OON 42012), 7♀ (MACN-Ar 28007 PBI_OON 42013), 6♂, 7 juvenile (MACN-Ar 28007 PBI_OON 42013), 1♀, 1♂, 3 juvenile (MACN-Ar 28016 PBI_OON 42014), 1♀ (MACN-Ar 28009 PBI_OON 42104), 1♂, 4♀ (MACN-Ar 27997 PBI_OON 42111), 1♂, 5 juvenile (MACN-Ar 28002 PBI_OON 42113), 1♀ (MACN-Ar 28002 PBI_OON 42113), 1♂ (MACN-Ar 28015 PBI_OON 42115), 1♂ (MACN-Ar 28014 PBI_OON 42123); same collectors, −31.88484° −58.23930°, grassland close to marsh, in grassy tussock, 25 m, Aug. 07, 2011, 2♀ (MACN-Ar 28160 PBI_OON 42002), 1♂, 1♀, 1juvenile (MACN-Ar 28159 PBI_OON 42006), 1♀, 1♂; 2 juvenile (MACN-Ar 27999 PBI_OON 42099), 1♂, 1♀, 1 juvenile (MACN-Ar 27988 PBI_OON 42110); same collectors, Sector Sur, −31.88768° −58.31186°, grass-

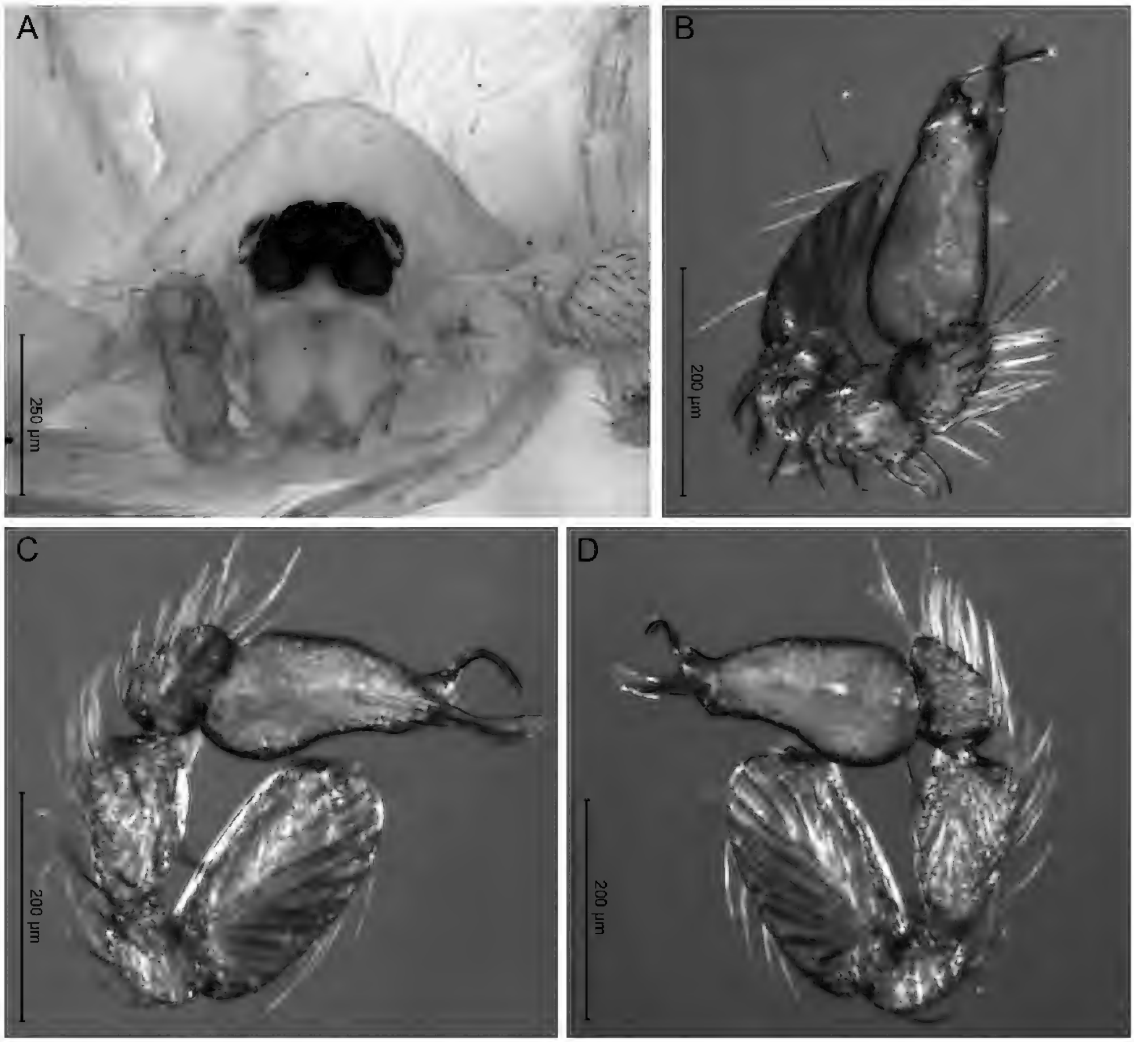


Fig. 17. *Neotrops darwini*, new species, male. (**A,** PBI_OON 14799, **B–D,** PBI_OON 14971). **A.** Carapace, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

land and low forest with palms, 30 m, Aug. 07, 2011, 2♂, 1♀ (MACN-Ar 28008 PBI_OON 42116), 1♀ (MACN-Ar 28000 PBI_OON 42118); Dept. Uruguay: Ruta Nac. 14, 7 km E Concepción del Uruguay, −32.483128° −58.308484, 26 m, Aug. 08, 2011, Ramírez et al., MACN-Ar, 1♂ (MACN-Ar 28018 PBI_OON 42102). **Ciudad Autónoma de Buenos Aires:** Reserva Ecológica Costanera Sur, −34.59638°, −58.36000°, Mar. 30, 2009, A. Mamani, P. Turienzo, 1♂, 2♀ (MACN-AR 20507 PBI_OON 14940), Apr. 13, 2009, L. Zapata, A. Mamani, 1♀ (MACN-AR 20506 PBI_OON 14941), Sept. 29, 2008, P. Turienzo, A. Mamani, 1♂ (MACN-AR 21603 PBI_OON 14956), Feb. 16, 2009, A. Mamani, P. Turienzo, 1♂ (MACN-AR 21926 PBI_OON 14972), Mar. 16, 2009, A. Mamani, P. Turienzo, 1♂ (MACN-AR 21928 PBI_OON 14973), Apr. 13, 2009, A. Mamani, L. Zapata, 1♀ (MACN-AR 22172 PBI_OON 14978), Feb. 16, 2009, A. Mamani, P. Turienzo, 1♂ (MACN-AR 22175 PBI_OON 14977), Sept. 26, 2008, P. Turienzo, A. Mamani, 1♂ (MACN-AR 21923 PBI_OON 14970), Mar. 30, 2009, A. Mamani, P. Turienzo, 1♀ (MACN-AR 22414 PBI_OON 14987), Oct.

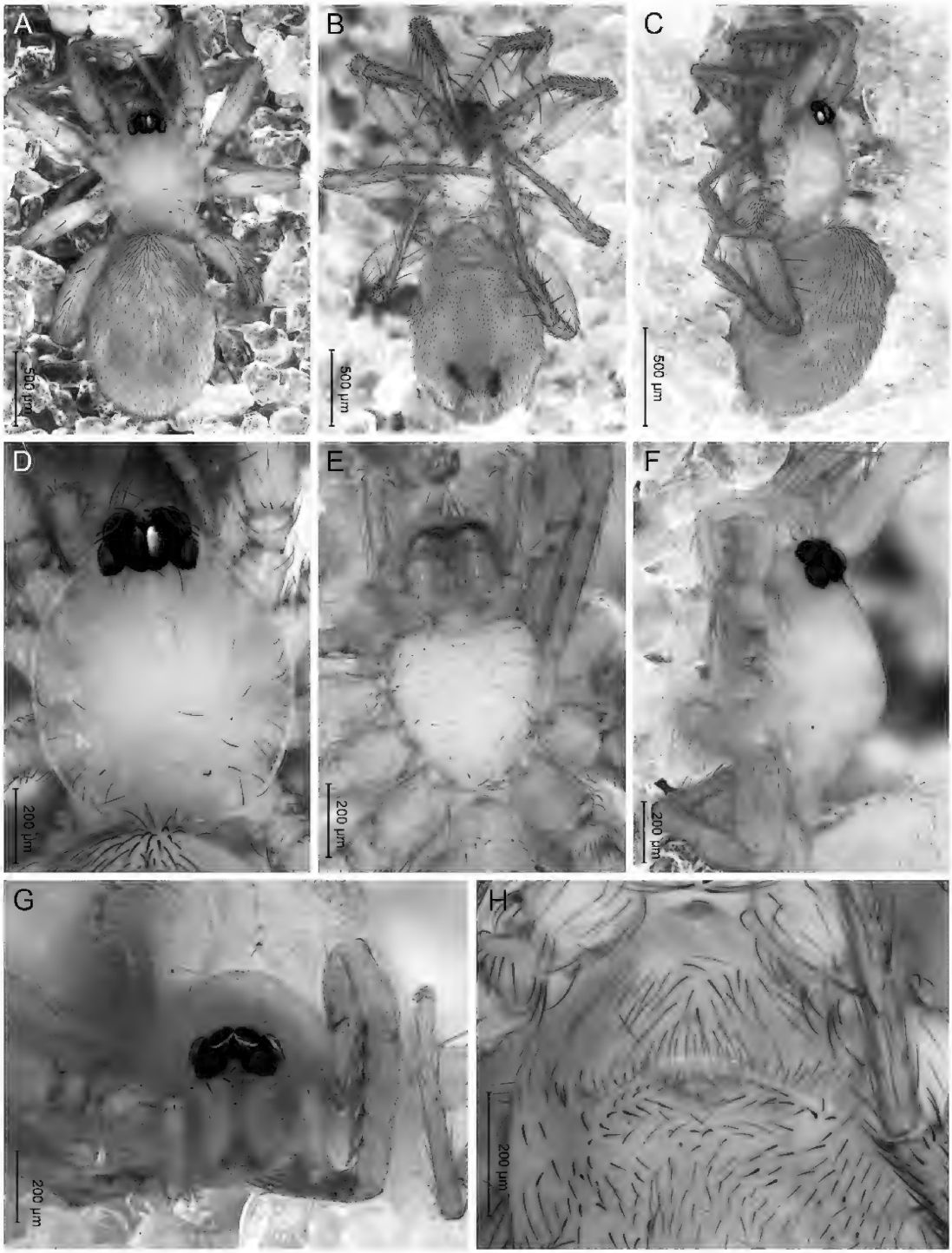


Fig. 18. *Neotrops darwini*, new species, female. (**A–D, H,** PBI_OON 14957, **E–G,** PBI_OON 14799). **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

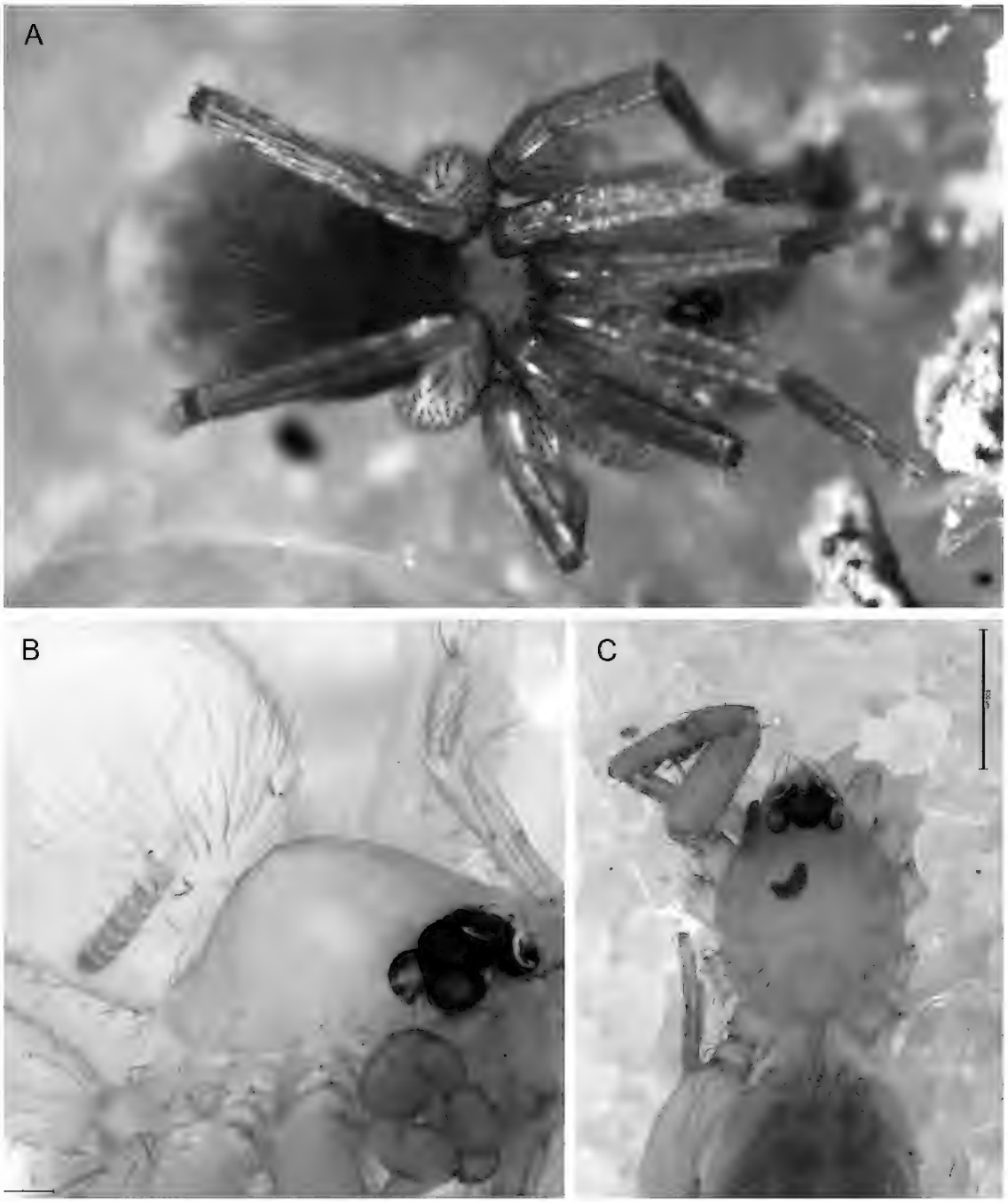
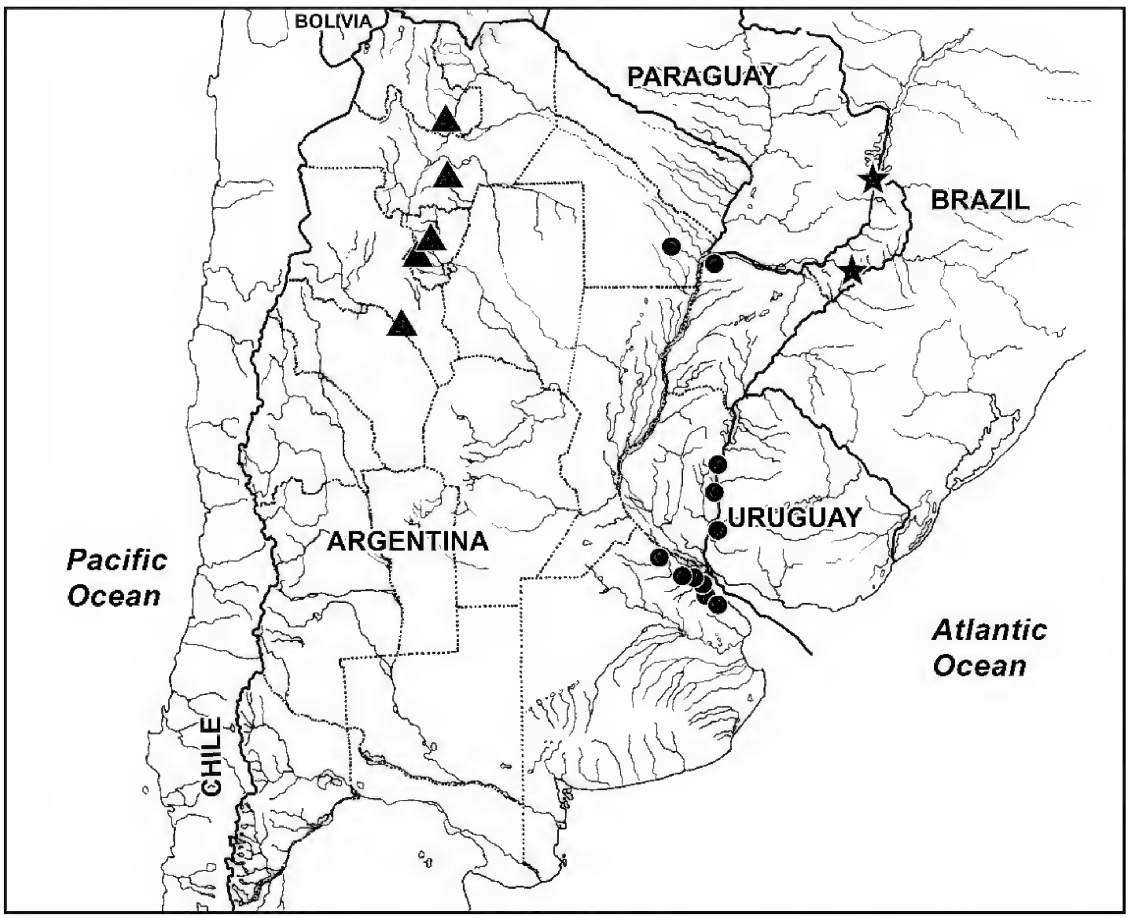


Fig. 19. *Neotrops darwini*, new species. **A.** Living female, dorsal view (PBI_OON 15013). **B.** Preserved male with an acrocerid parasitoid larva inside the abdomen (PBI_OON 14799). **C.** Preserved female with an acrocerid parasitoid larva inside the carapace (PBI_OON 14955).



Map 1. Records of *Neotrops darwini* (circles), *N. tucumanus* (triangles) and *N. rubioi* (stars).

13, 2008, P. Turienzo, 1♀ (MACN-AR 22413 PBI_OON 14988), Oct. 27, 2008, A. Mamani, 1♀ (MACN-AR 23121 PBI_OON 14994), Jan. 19, 2009, A. Mamani, P. Turienzo, 1♀ (MACN-AR 23122 PBI_OON 14996), Nov. 10, 2008, A. Mamani, P. Turienzo, 2♂ (MACN-AR 24297 PBI_OON 15012), Sept. 29, 2008, P. Turienzo, A. Mamani, 1♂ (MACN-AR 21927 PBI_OON 14974); same locality, *Tessaria integrifolia* forest, −34.60444°, −58.35000°, Sept. 29, 2008, P. Turienzo, A. Mamani, 5♀ (MACN-AR 21602 PBI_OON 14955), Feb. 16, 2009, A. Mamani, P. Turienzo, 1♂ (MACN-AR 21924 PBI_OON 14969), Mar. 30, 2009, A. Mamani, P. Turienzo, 1♀ (MACN-AR 22173 PBI_OON 14975), Apr. 27, 2009, P. Turienzo, L. Zapata, 1♀ (MACN-AR 22174 PBI_OON 14976), Nov. 10, 2008, A. Mamani, P. Turienzo, 1♀ (MACN-AR 23120 PBI_OON 14997), Oct. 27, 2008, A. Mamani, 1♀ (MACN-AR 23583 PBI_OON 15007), Nov. 24, 2008, A. Mamani, L. Zapata, 1♂ (MACN-AR 23584 PBI_OON 15008), Oct. 27, 2008, A. Mamani, 1♀ (MACN-AR 24302 PBI_OON 15011); same locality, Área Fuego, Parcela Norte, Apr. 08, 2011, H. Sirolli and L. Zapata, 1♂ (MACN-AR 27554 PBI_OON 43198); same locality, Camino de los sauces: mirador al Canal Sur, 34.61694°, 58.34722°, Oct. 24, 2011, L. Zapata, G. Rubio, M. Izquierdo, M. Guala, y C. Grismado, 2♀ (MACN-Ar 28195 PBI_OON 42021), 1♂ (MACN-Ar 28190 PBI_OON 42025); same locality, Canal de Viamonte, forest, −34.60458°, −58.35008°, May 01, 2008, to Apr. 01, 2009, Lorena Zapata, 1♀ (MACN-AR 25816 PBI_OON 30549), Sept. 29, 2008,

P. Turienzo, A. Mamani, 3♀ (MACN-AR 25817 PBI_OON 30550), Nov. 24, 2008, forest soil and litter, A. Mamani, L. Zapata, 1♀ (MACN-AR 25961 PBI_OON 30687). **Buenos Aires:** Berazategui: Hudson, F.C.G.R., May 01, 1984, M. Ramírez, 1♀ (MACN-AR 15371 PBI_OON 14799); 1♂ (MACN-AR 15371 PBI_OON 14799). Campana: Reserva Natural Otamendi, grassy field, in "dipsacal," Feb. 07, 1992, Fuentes, B. and Di Iorio, O., 1♂ (MACN-AR 27485 PBI_OON 43192); Reserva Natural Otamendi, Entrance to "Sendero de la laguna," grassland, 21 m, −34.22611°, −58.90111°, May 19, 2007, to June 09, 2007, C. Grismado, I. Crudele, S. Trivero, and N. Olejnik, 1♂ (MACN-AR 12632 PBI_OON 14925). San Pedro: Reserva Municipal Vuelta de Obligado, barranca del Paraná, Grassland, −33.59722°, −59.80944°, Oct. 11, 2009, N. López, C. Grismado, N. Olejnik and I. Crudele coll, 1♀ (MACN-AR 24303 PBI_OON 15013). Tigre: Tigre, Oct. 01, 1953, Viana, 1♀, 1♂, 3 juvenile (MACN-AR 15366 PBI_OON 14763); Tigre, Aug. 01, 1956, Viana, 1♂ (MACN-AR 15368 PBI_OON 14803). Zárate: Atucha, May 10, 1987, M. Ramírez, 1♀ (MACN-AR 15367 PBI_OON 14798). **URUGUAY: Río Negro:** Fray Bentos, −33.11305°, −58.25138°, Dec. 20, 2007, no data of collector, 3♂, 3♀, 2 Juveniles (FCE 2315 PBI_OON 42194).

DISTRIBUTION: Argentina, in Chaco, Corrientes, Entre Ríos, and northeast of Buenos Aires province (including Buenos Aires city), near the Paraná and La Plata rivers, and Uruguay (Río Negro). Probably also in intermediate localities along the Paraná coast (map 1).

NATURAL HISTORY: The largest series was collected by pitfall traps at the type locality, an urban ecological reserve near the Río de la Plata, in Buenos Aires city. These specimens were found in forests of *Tessaria integrifolia* (Asteraceae, "aliso de río"), but other individuals were also collected in highly disturbed neighboring areas, or in the bases of *Cortaderia selloana* ("pampas grass") and other Poaceae. At El Palmar, many individuals were caught on the base of grasses (*Cortaderia* and others), especially in swampy areas with diverse vegetation (both in grassland and forest formations). In Vuelta de Obligado, a female was collected during the night in the bank of the Paraná river, close to the entrance of a nest of the tiny ant *Wasmannia auropunctata*, suggesting that the spider could prey on them. Interestingly, another Argentine oonopid (the hard-bodied *Gamasomorpha wasmanniae* Mello-Leitão) was collected in association with this ant species under stones, in Córdoba Province (Birabén, 1954). Some specimens from the type locality and from Hudson are hosts of parasitoid acrocerid larvae (Shaun L. Winterton, identification from photographs). This could be the first report of the parasitoid relationship between acrocerids and oonopids. Most of the larvae were found inside the anterior part of the abdomen, near the booklungs (fig. 19B), although a few specimens are clearly visible in the cephalothorax (fig. 19C).

Neotrops tucumanus (Simon, 1907), new combination
Figures 20–25, 26C–D; map 1

Oonops tucumanus Simon, 1907: 251, f. 2. Male holotype from Argentina: Tucumán, Silvestri col. (MNHN AR 1496 PBI_OON 30688). Deposited in MNHN. Examined.

DIAGNOSIS: Males are similar to those of *N. darwini* but have the embolus less curved and conductor straighter and distally pointed (fig. 26D). The female anterior receptacle is nearly cylindrical, not widened distally (fig. 26C).

NOTE: The holotype male has the embolus slightly shorter (broken?) and more curved than in the specimens collected in recent times (fig. 22D–F), but the shape of the conductor is identical, which distinguishes it from the closely related *N. darwini*.

DESCRIPTION: MALE (PBI_OON 14766). Total length 2.10. **Cephalothorax:** Carapace yellow, ovoid in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to between 0.5 and 0.75 times its maximum width, cuticle surface with iridescence; lateral margin undulate; nonmarginal pars cephalica setae absent; nonmarginal pars thoracica setae absent; marginal setae dark, needlelike. Clypeus: many stout erect

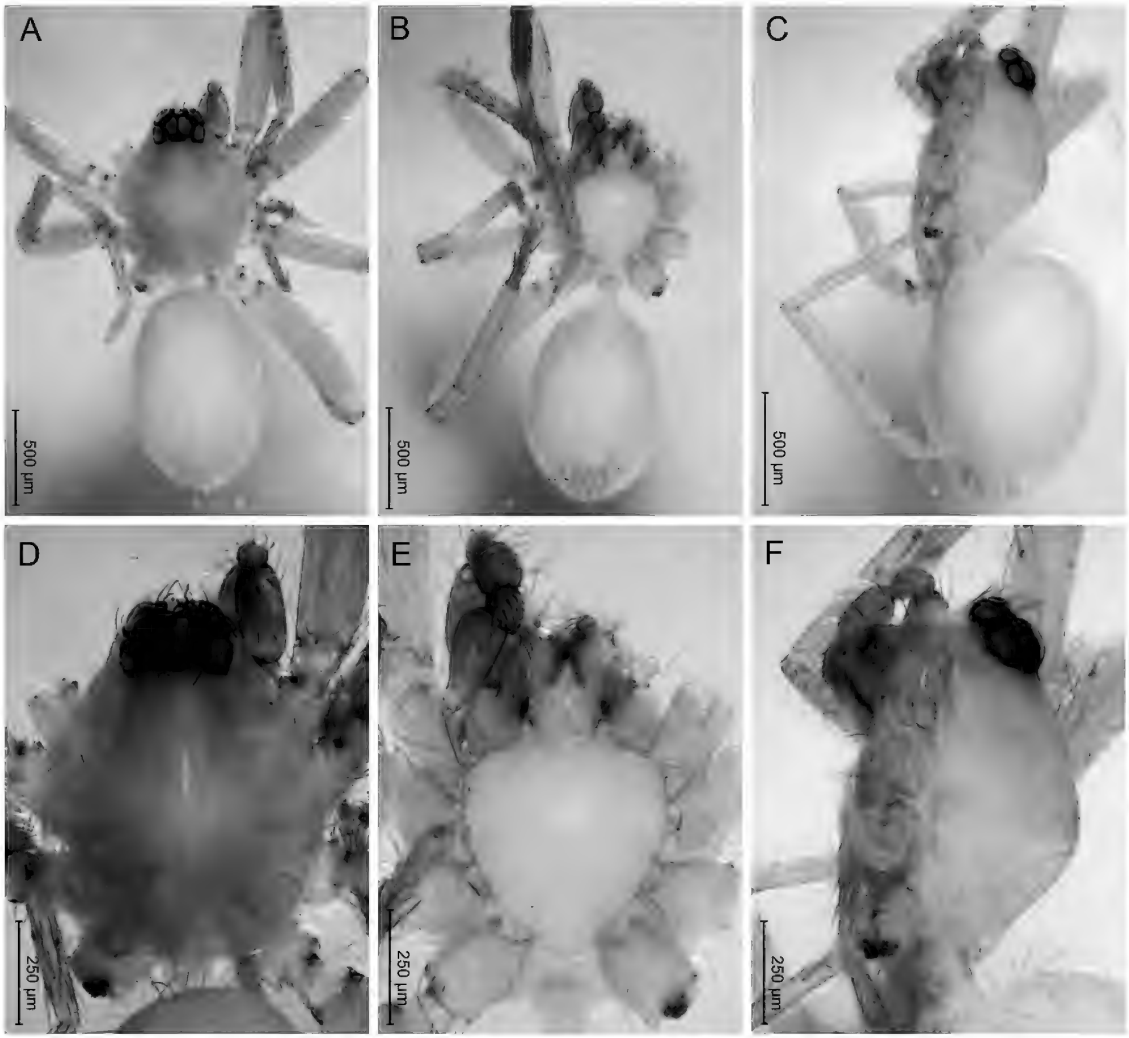


Fig. 20. *Neotrops tucumanus* (Simon), male PBI_OON 14766. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

setae reaching to the ocular area, dark, stout (fig. 20F). Eyes on a dark area, all subequal, ALE circular, PME oval, PLE oval; posterior eye row straight from front; ALE separated by their radius to diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum as long as wide, light yellow, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV; setae sparse, evenly scattered. Mouthparts: chelicerae, endites, and labium yellowish white, cheliceral setae dark, evenly scattered. Labium anterior margin indented at middle, with six or more setae on anterior margin. Endites distally not excavated, anteromedian tip unmodified, elongated, with a lamella laterally directed; with a longitudinal ectal ridge, especially conspicuous near the lateral margins of the labium (fig. 20E). **Abdomen:** Dorsum white. Epigastric and postepigastric area setae dark, needlelike. Postepigastric scutum yellow. Spinneret scutum absent. Dorsum setae present, dark, needlelike. Colulus represented only by setae. **Legs:**

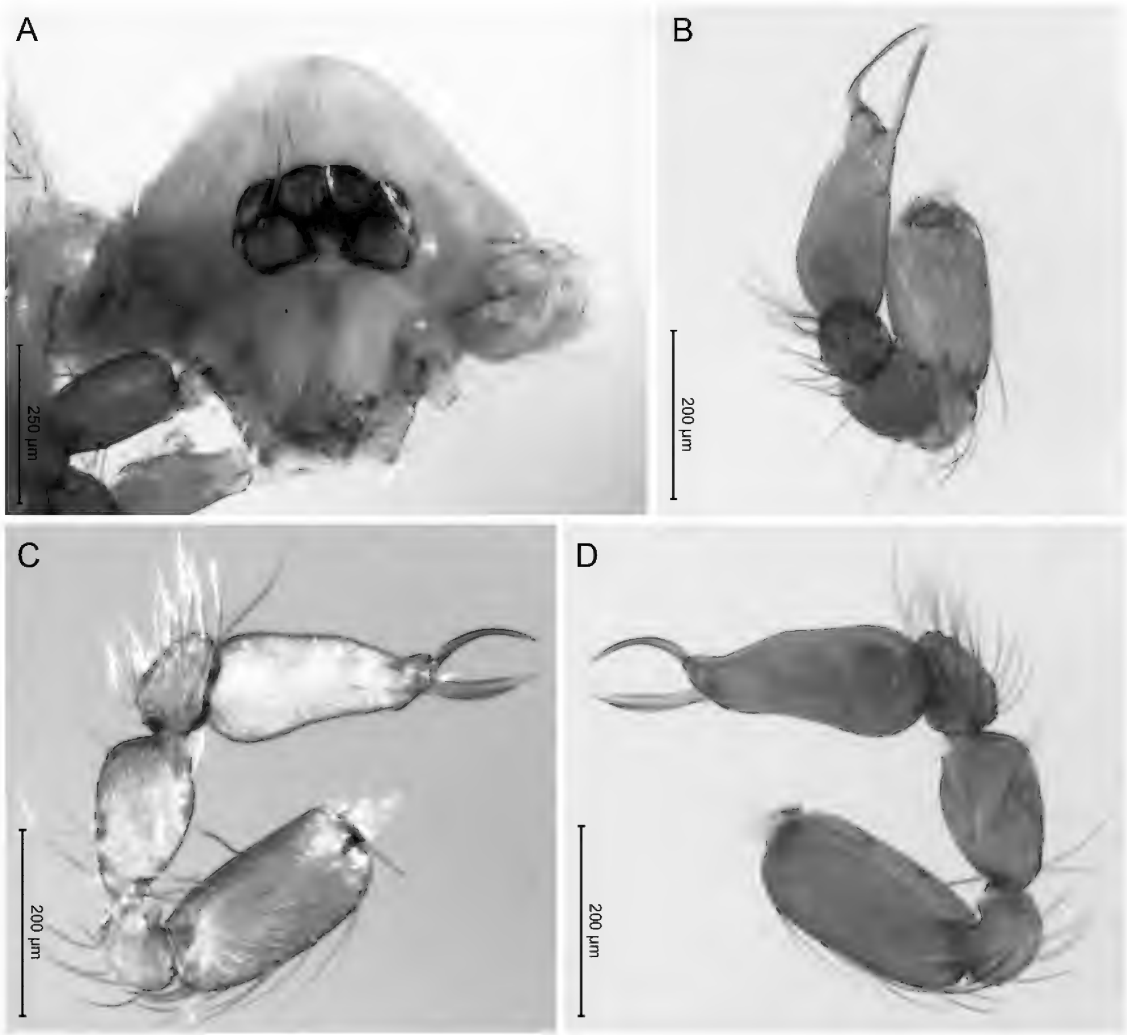


Fig. 21. *Neotrops tucumanus* (Simon), male (**A,** PBI_OON 14766, **B–D,** PBI_OON 14783). **A.** Carapace, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

Yellow; femur IV not thickened, same size as femora I–III. Leg spination: leg I: femora pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora d0-1-0, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d1-1, tibiae vap1, metatarsi vap2; leg IV: femora d1-1-1, tibiae d1-0-1, p1-1, r1-1, v0-1-1, metatarsi vap2. Trichobothria not examined. **Genitalia:** Palp proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, not fused with bulb; bulb pale orange, more than two times as long as cymbium, slender, elongated, distal part with an anteriorly directed, razor-shaped conductor; embolus light (figs. 26D, 21B–D).

FEMALE (PBI_OON 14766). Total length 2.17. As in male except as noted. **Cephalothorax:** Carapace broadly oval in dorsal view (figs. 23D, 24A), cuticle surface with iridescence and elongated platelets (fig. 24G). The stout clypeal setae are not as erect as in the male. Eyes on a dark area. Sternum precoxal triangles present; setae dark. Palp spines absent (fig. 25A). **Abdomen:** Epigastric and postepigastric area setae dark, needlelike. **Legs:** Patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora pv0-0-

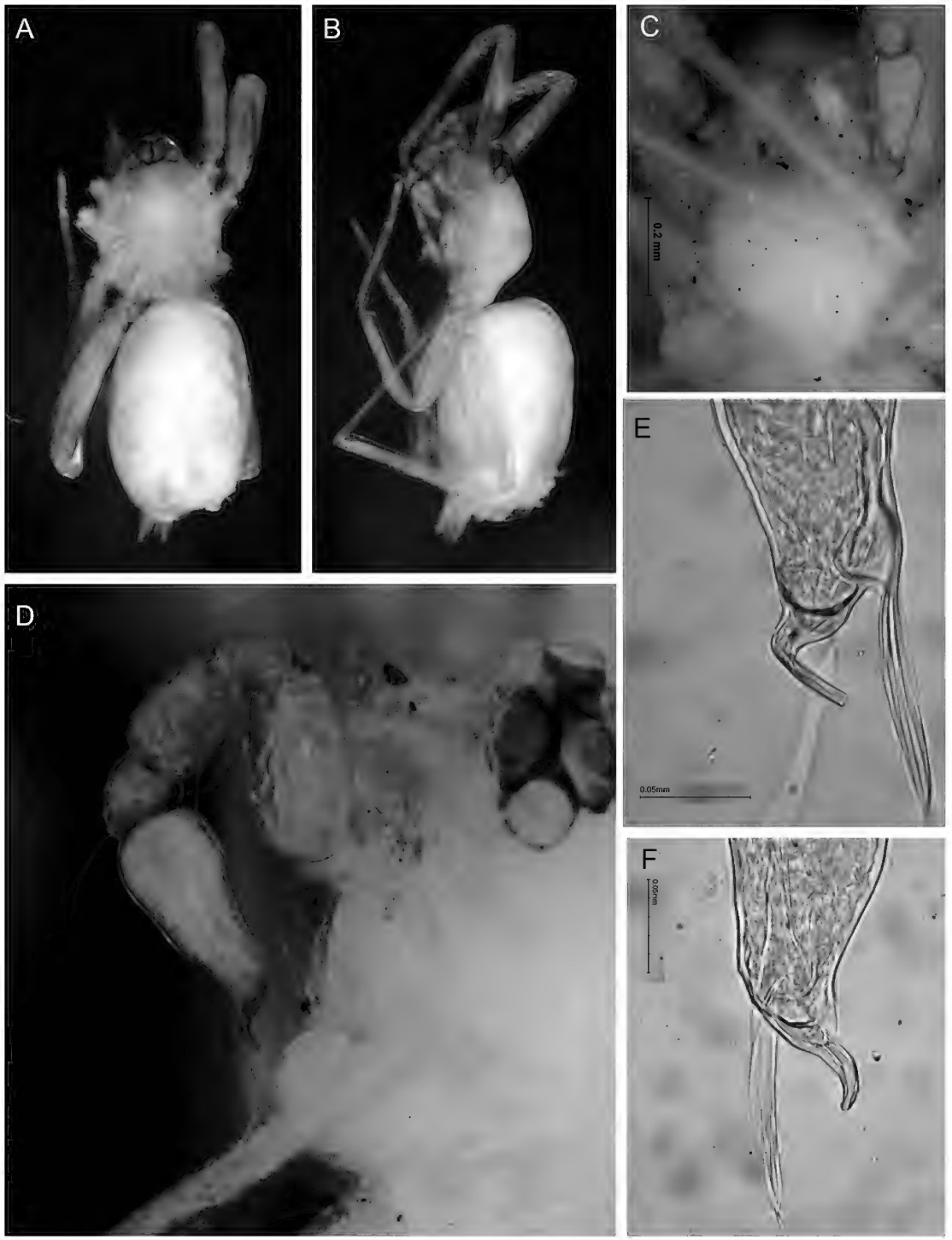


Fig. 22. *Neotrops tucumanus* (Simon), male holotype (PBI_OON 30688). **A.** Habitus, dorsal view. **B.** Same, lateral view. **C.** Cephalothorax, ventral view. **D.** Left palp, retrolateral view. **E.** Right palp, cleared, embolus and conductor, dorsal view. **F.** Same, retrolateral view.

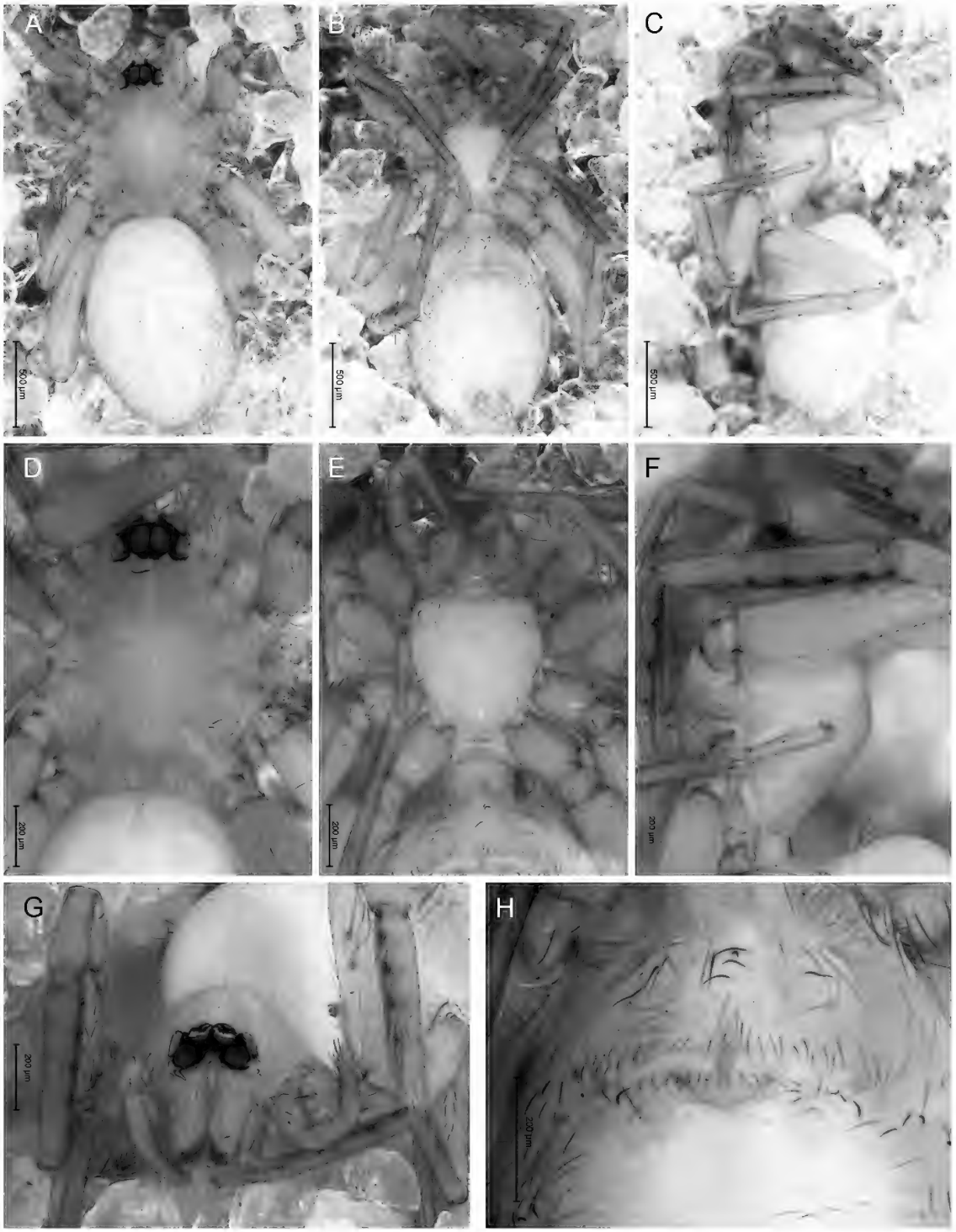


Fig. 23. *Neotrops tucumanus* (Simon), female PBI_OON 14766. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

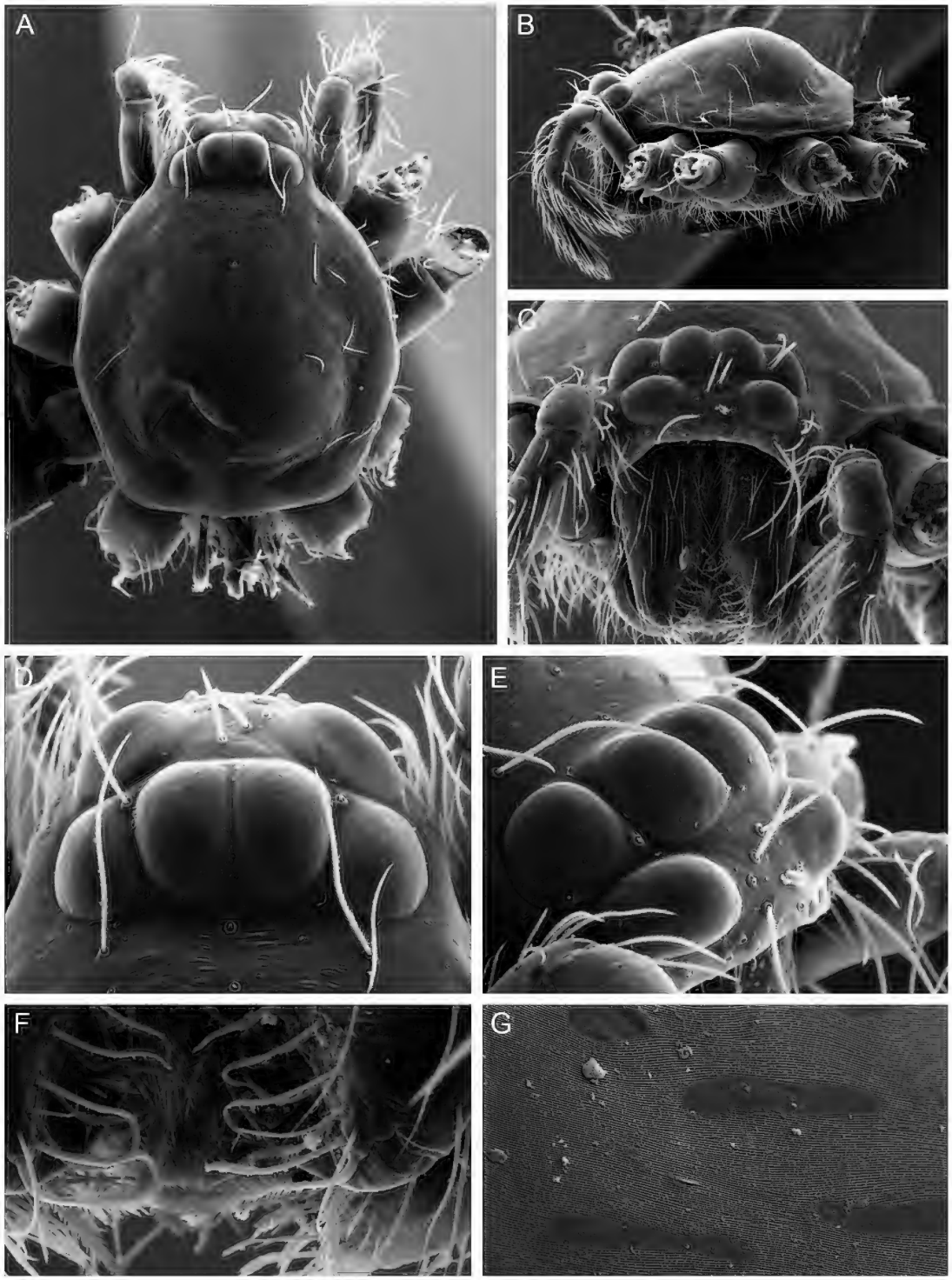


Fig. 24. *Neotrops tucumanus* (Simon), female PBI_OON 15375. **A.** Carapace, dorsal view. **B.** Same, lateral view. **C.** Same, anterior view. **D.** Ocular area, dorsal view. **E.** Same, lateral view. **F.** Chelicerae, distal part, anterior view. **G.** Platelets on carapace.

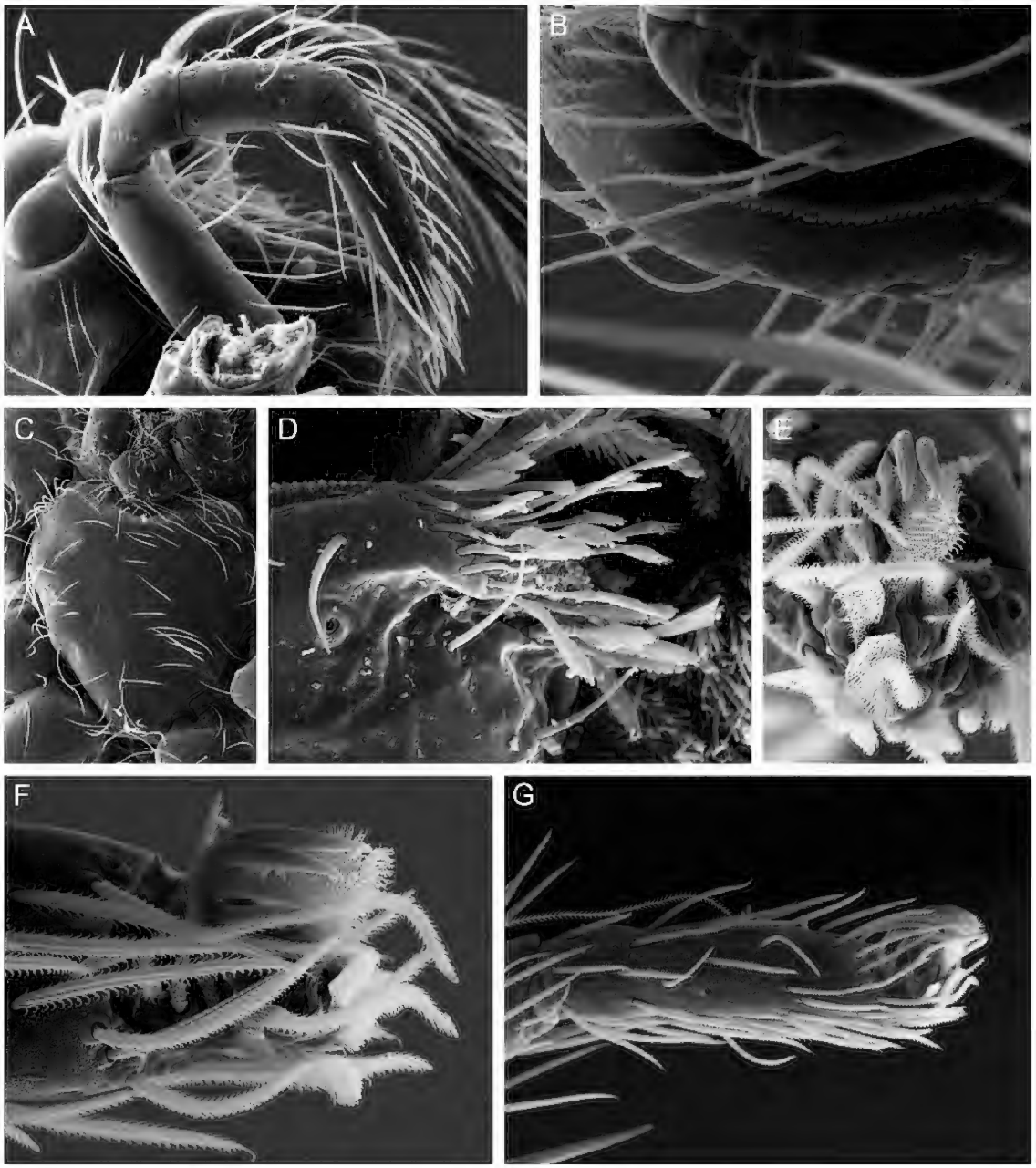


Fig. 25. *Neotrops tucumanus* (Simon), female (**A–D,** PBI_OON 15375, **E–G,** PBI_OON 14783). **A.** Palp, retrolateral view. **B.** Serrula, lateral view. **C.** Sternum, ventral view. **D.** Endite, distal part, detail of setae, ventral view. **E.** Leg I, tarsal claws, apical view. **F.** Same, retrolateral view. **G.** Tarsus I, retrolateral view.

1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d1-1, tibiae vap1, metatarsi vap2; leg IV: femora IV d1-1-1, tibiae d1-0-1, p1-1, r1-1, v0-1-1, metatarsi d1, vap2. **Genitalia** (figs. 23H, 26C): Ventral view: dark anterior receptacle and the wide, V-shaped transverse ridges visible through

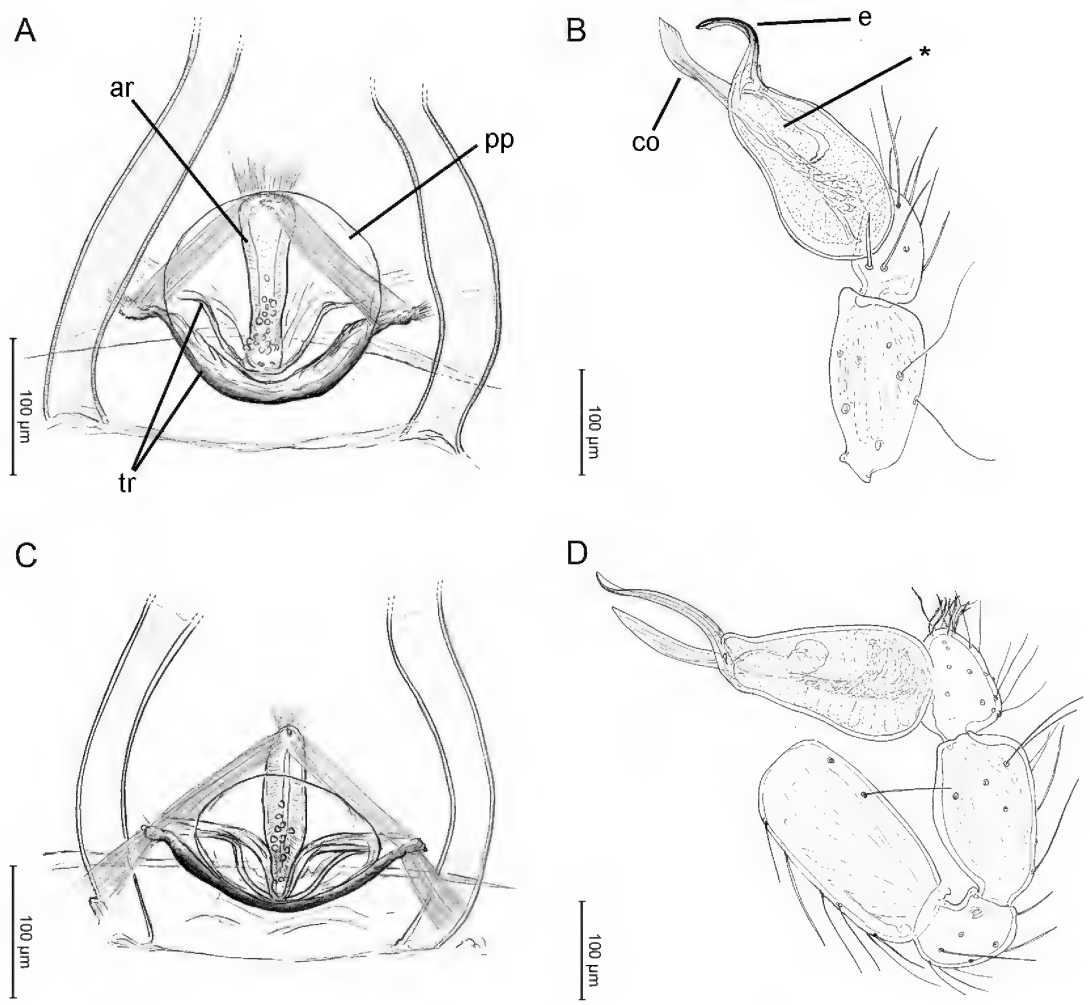


Fig. 26. *Neotrops* spp. genitalia, cleared. **A–B.** *N. darwini*, new species, **C–D.** *N. tucumanus* (Simon). **A.** Internal female genitalia, dorsal view (PBI_OON 14798), **B.** Male palp, retrolateral view (PBI_OON 14763), **C.** Internal female genitalia, dorsal view (PBI_OON 14766), **D.** Male palp, retrolateral view (PBI_OON 14759). Abbreviations: **ar,** anterior receptacle; **co,** conductor (asterisk: internal vesicle); **e,** embolus; **pp,** posterodorsal plate; **tr,** transverse ridges.

cuticle. Anterior receptacle cylindrical, not widened at the tip, with accessory glands along most of its length. Posterodorsal plate transverse, oval, not completely covering anterior receptacle in dorsal view.

OTHER MATERIAL EXAMINED: **ARGENTINA: Catamarca:** Chumbicha, Aug. 01, 1994, M. Ramírez, 1♂ (MACN-AR 15376 PBI_OON 14781), 1♂ (MACN-AR 15378 PBI_OON 14782); Sierra de Ancasti, Yungas, under stones, June 22, 2011, G. Rubio, 1♀ (MACN-Ar 27897 PBI_OON 43219). **Jujuy:** Perales, Dec. 13, 1950, M. Biraben, 1♂ (MLP 134 PBI_OON 14759). **Salta:** Road to Posta de Yatasto, montane forest, 807 m, −25.59096°, −64.95250°, Nov. 03, 2006, G. Rubio, 1♀ (CDA PBI_OON 30674). **Tucumán:** 5 km O después de El Indio, camino a Tafí del Valle, Apr. 21, 2000, P. Goloboff and L. Lopardo, 3♂, 3 juvenile (MACN-AR 15379 PBI_OON 14783); Cochuna, July 02, 1995, M. Ramirez, P. Golob-

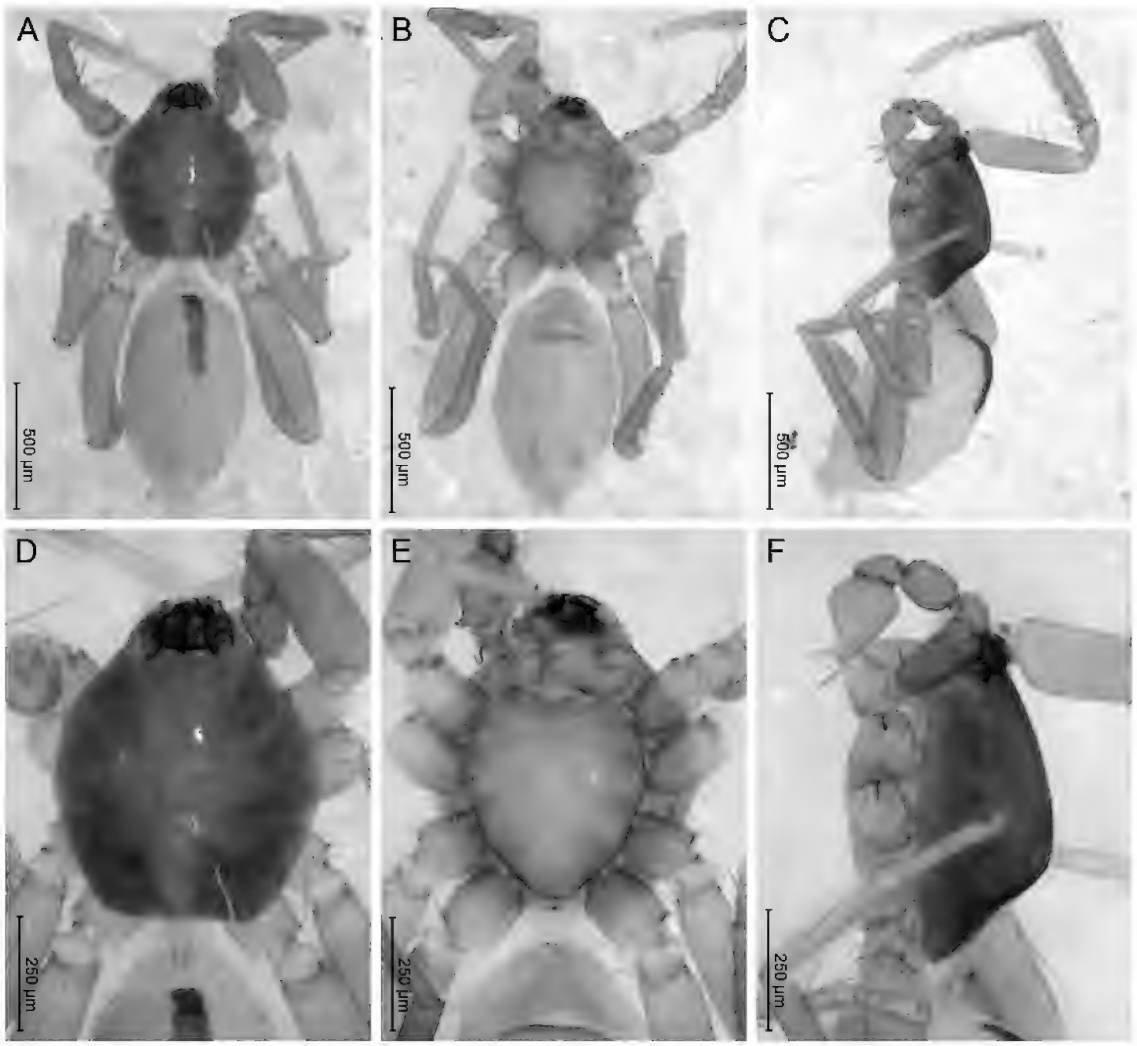


Fig. 27. *Neotrops nigromaculatus* (Mello-Leitão), male PBI_OON 14784. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

off, 2♂, 1♀, 2 juvenile (MACN-AR 15377 PBI_OON 14766); Ruta Provincial 307, 10 km NO de El Indio, Nov. 24, 1994, M. Ramírez and P. Goloboff, 1♀ (MACN-AR 15375 PBI_OON 14780); Ruta Provincial 307, km 36, Yungas, leaf litter, Nov. 01, 2004, C. Grismado and L. Compagnucci, 1♀ (MACN-AR 27430 PBI_OON 43098).

DISTRIBUTION: Yungas (montane forests) of the northwestern Argentina (Jujuy, Salta, Tucumán, and Catamarca provinces (map 1).

NATURAL HISTORY: Unknown.

The *nigromaculatus* Group

DIAGNOSIS: Male palpi with short, nearly piriform bulb; embolus accompanied by a single conductor, without additional distal apophysis. Both sexes with tarsi I–II only slightly shorter than the metatarsi, which have three rather than four ventral pairs of spines in females (fig. 32G). Carapace usually heavily sclerotized, pigmented with orange or brown.

This group includes nine species (*nigromaculatus, yunga, rubioi, pombero, lorenae,*

Fig. 28. *Neotrops nigromaculatus* (Mello-Leitão). (**A,** male PBI_OON 14797, **B–D,** male PBI_OON 42122). **A.** Carapace, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

avalosi, yabare, piacentinii, and, probably, *izquierdoi*) that span a wide distribution, from La Paz, in Bolivia, through Paraguay, northern and eastern Argentina, to Uruguay. In addition, there are several still undescribed species in southern and eastern Brazil. At least two subgroups are hypothesized: *pombero* and *lorenae* are united by the Y-shaped anterior receptacle of the females (fig. 53A, C), and *nigromaculatus, yunga,* and *rubioi* by the dorsal sclerotized stripe on the male abdomen. This latter character fits well with the hypothesis of Platnick and Dupérré (2010) of a gradual sclerotization from carapace to abdomen in the evolution of the group, leading to the syndrome of gamasomorphy. The carapace in the *nigromaculatus* group is certainly more sclerotized than that of other *Neotrops*; moreover, the three species also have a sclerotized abdominal stripe. We however prefer not to name this sclerotized stripe as a scutum, because of its small size and its poorly defined borders.

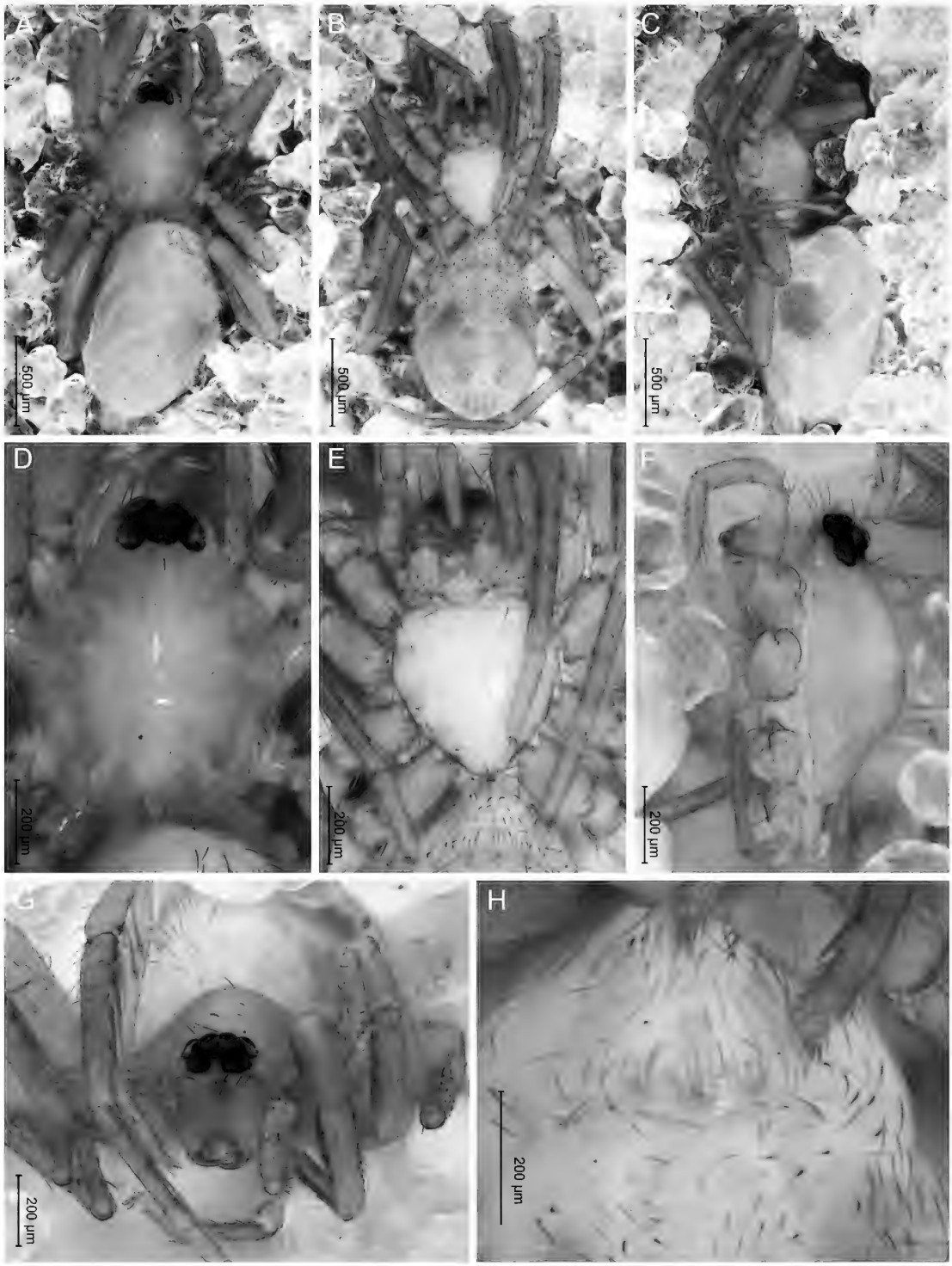


Fig. 29. *Neotrops nigromaculatus* (Mello-Leitão), female PBI_OON 14784. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

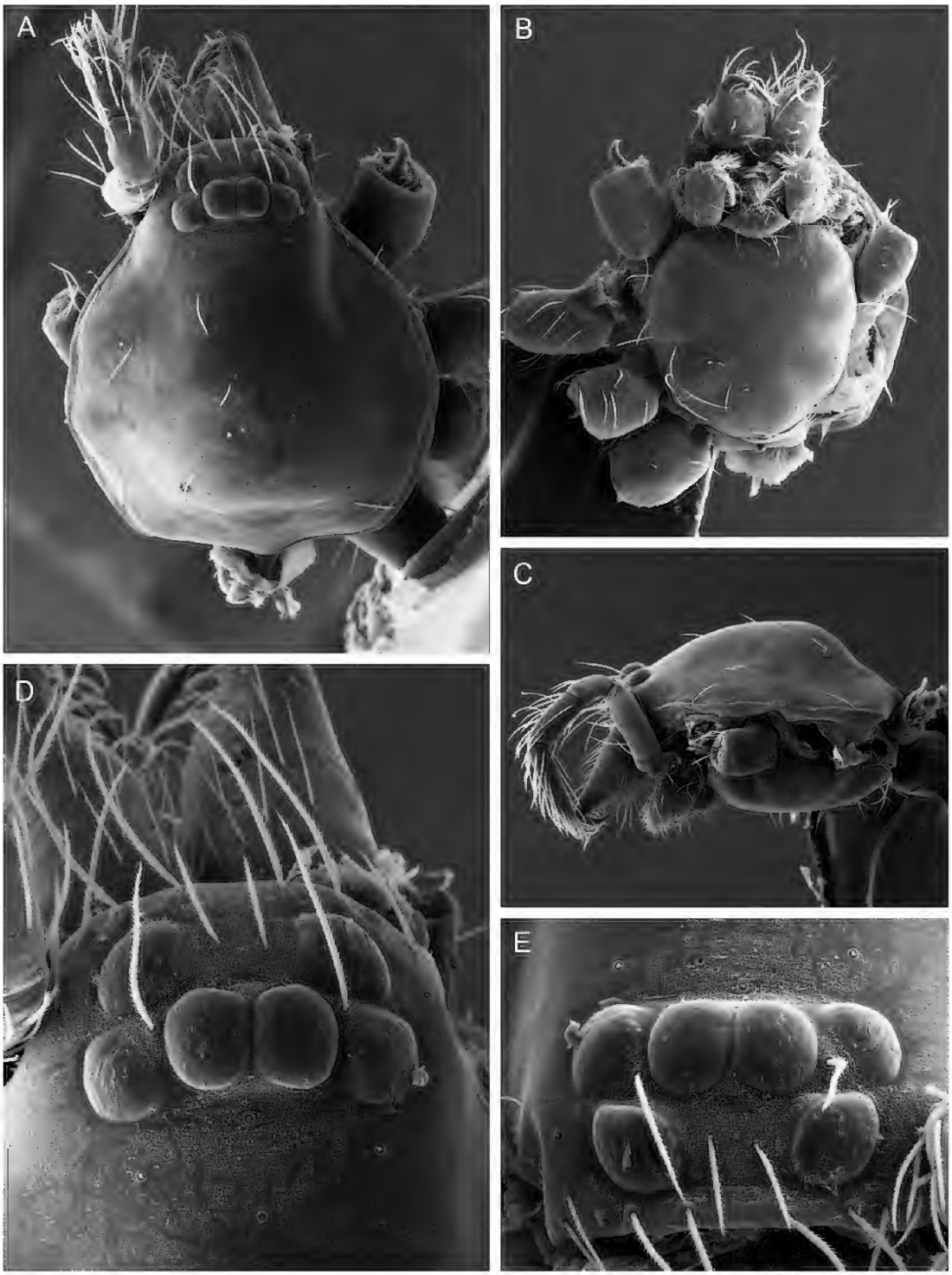


Fig. 30. *Neotrops nigromaculatus* (Mello-Leitão), female PBI_OON 14807. **A.** Carapace, dorsal view. **B.** Cephalothorax, ventral view. **C.** Same, lateral view. **D.** Ocular area, dorsal view. **E.** Same, anterior view.

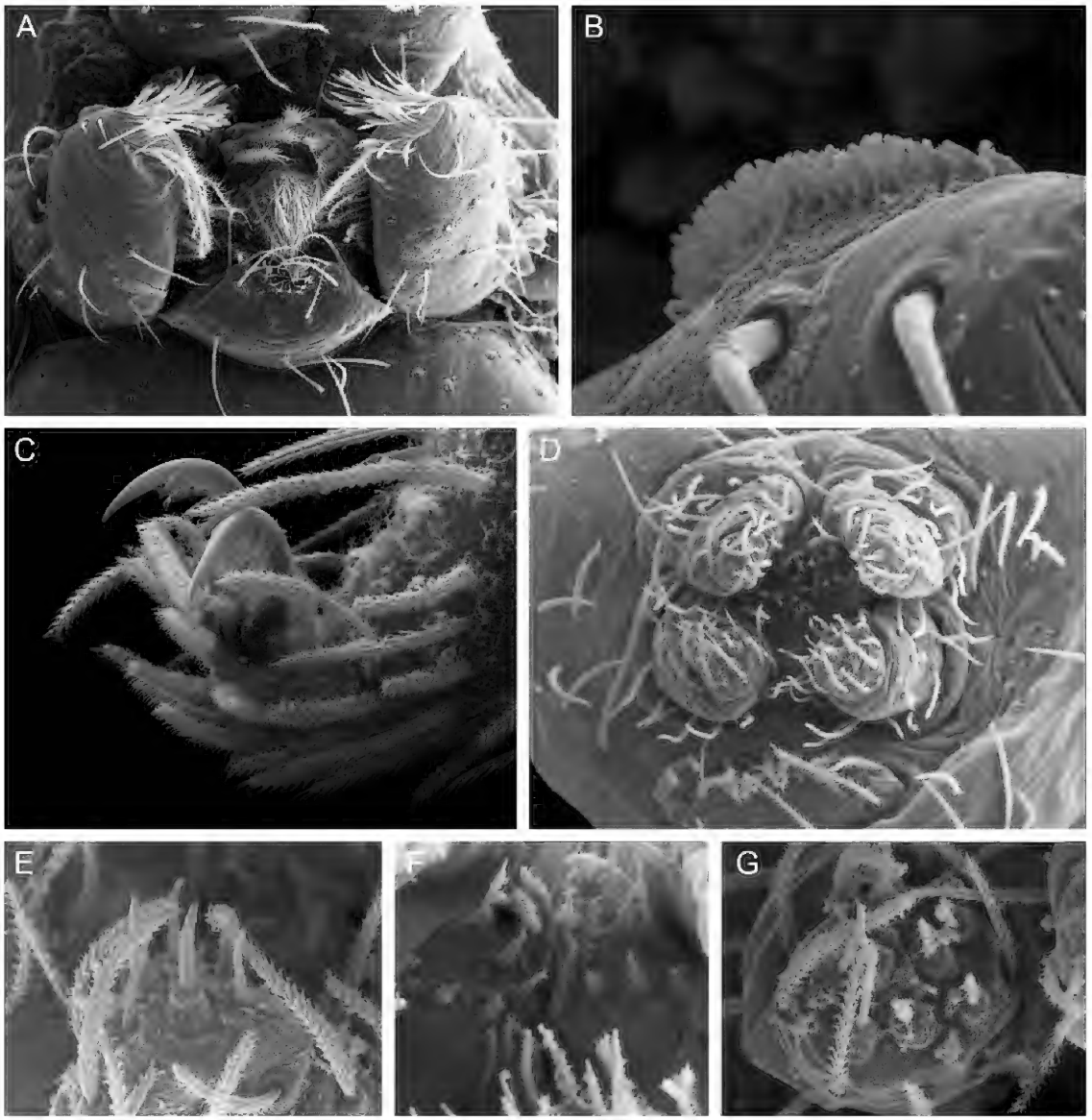


Fig. 31. *Neotrops nigromaculatus* (Mello-Leitão), female PBI_OON 14807. **A.** Mouthparts, ventral view. **B.** Serrula, lateral view. **C.** Leg I, tarsal claws, prolateral view. **D.** Spinnerets, ventral view. **E.** Anterior lateral spinneret. **F.** Posterior median spinnerets. **G.** Posterior lateral spinneret.

Neotrops nigromaculatus (Mello-Leitão, 1944), new combination
Figures 27–33, 40A–B; map 2

Oonops nigromaculatus Mello-Leitão, 1944: 323; female lectotype and female paralectotype from Argentina: Buenos Aires: José C. Paz, Rosas Costa leg., V.1941 (deposited in Museo de La Plata, MLP 15910, PBI_OON 00015064); Grismado et al., 2010: 215). Reexamined.

DIAGNOSIS: Males share with those of *N. yunga* and *N. rubioi* the dorsal sclerotized stripe on the abdomen (figs. 27A, 28A), but differ by the narrower conductor, with undulated margin (fig. 40B). Females resemble

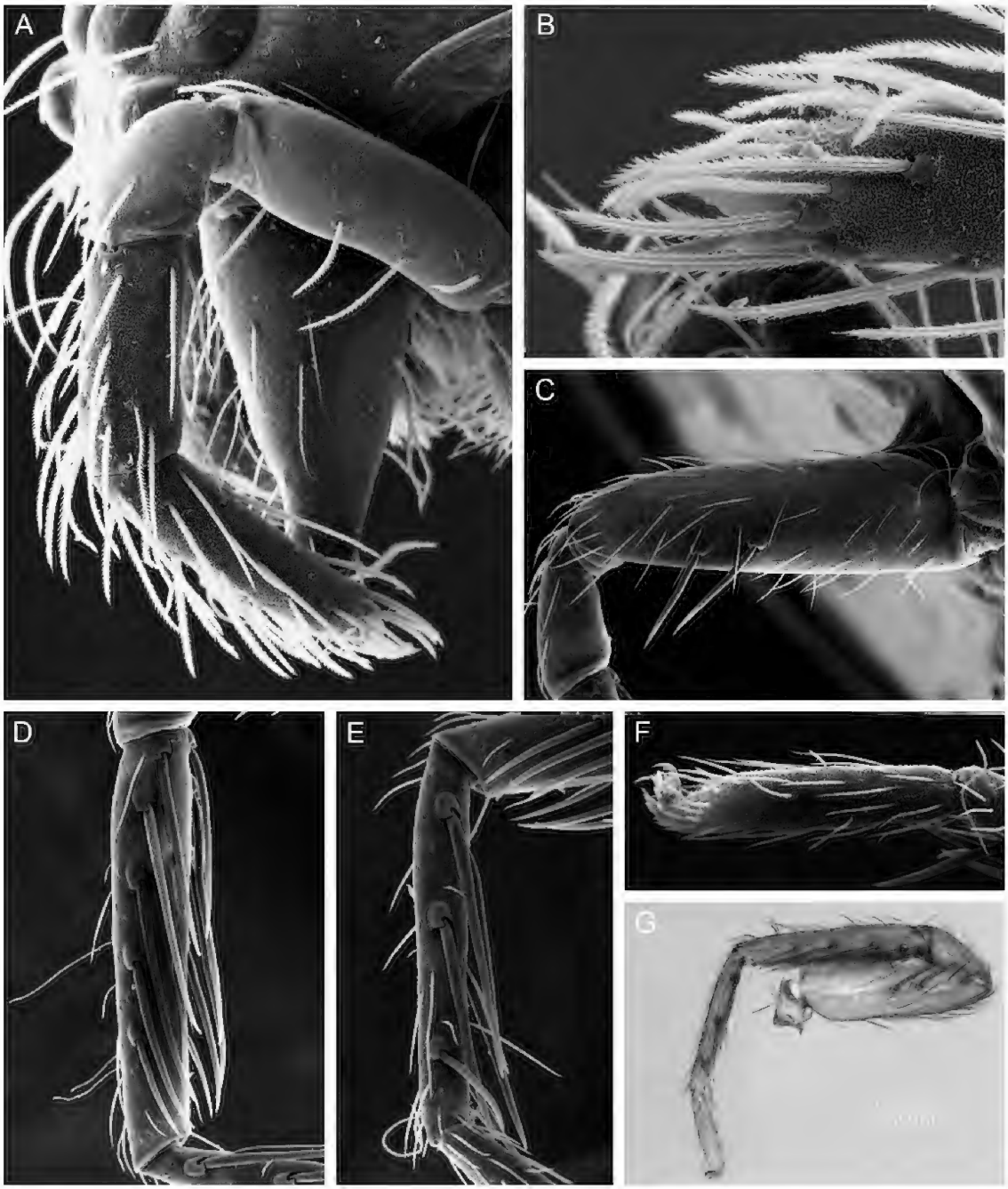


Fig. 32. *Neotrops nigromaculatus* (Mello-Leitão) female, **A–F** (PBI_OON 14807), **G** (PBI_OON 42109). **A.** Palp, retrolateral view. **B.** Same, detail of the tarsal tip. **C–G.** Right leg I. **C.** Femur and patella, prolateral view. **D.** Tibia, prolateral view. **E.** Metatarsus, prolateral view. **F.** tarsus, prolateral view. **G.** Entire right leg I, prolateral view.

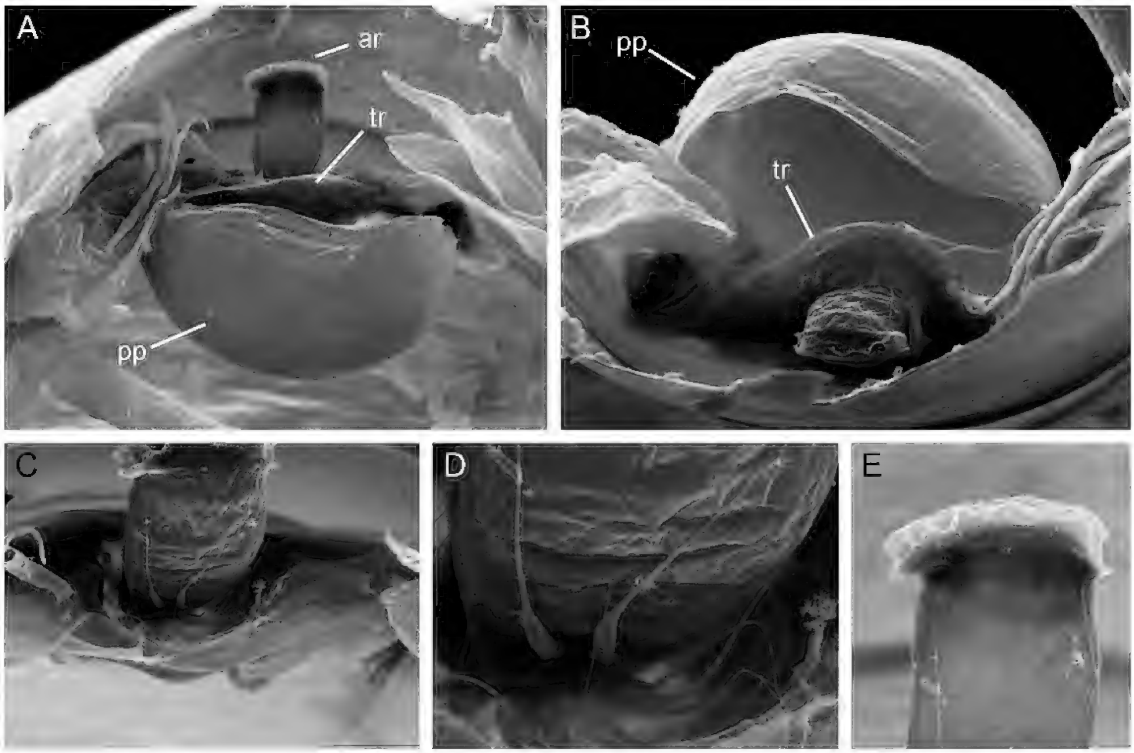


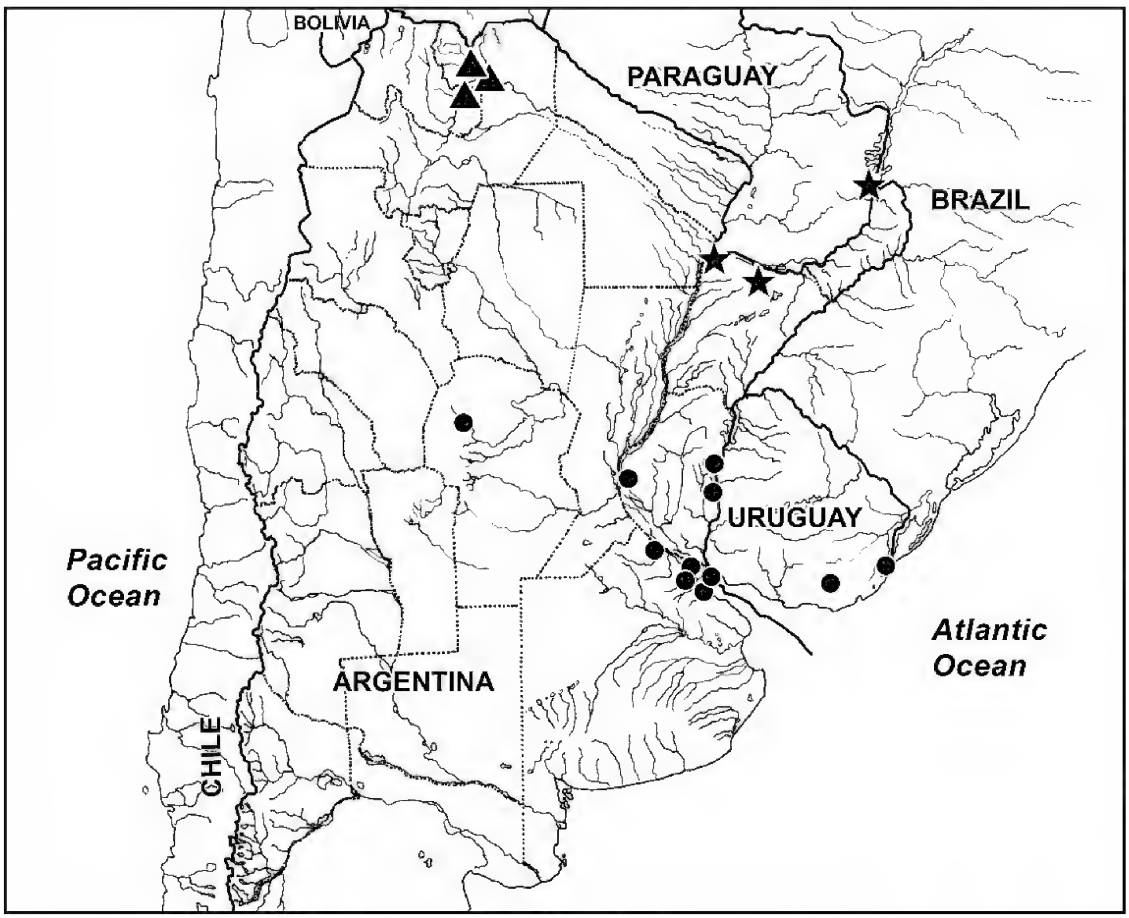
Fig. 33. *Neotrops nigromaculatus* (Mello-Leitão), female PBI_OON 14807. **A.** Internal female genitalia, dorsal view. **B.** Same, anterior view. **C.** Anterior recleptacle, anterior view. **D.** Same, detail of the gland ducts at the base. **E.** Anterior receptacle, detail of the distal part. Abbreviations: **ar,** anterior receptacle; **pp,** posterodorsal plate; **tr,** transverse ridges.

those of *N. rubioi* and *N. avalosi*, but with a more gradually widened anterior receptacle (fig. 40A).

DESCRIPTION: See Grismado et al (2010, under *Oonops*). Additional data are provided below.

FEMALE (PBI_OON 14807): Spinnerets (fig. 31D–G): ALS: with five spigots; PMS: with five spigots; PLS: with nine spigots. **Genitalia:** The posterior plate (erroneously interpreted as the posterior receptacle by Grismado et al., 2010) is highly domed, large, nearly circular, covering dorsally the anterior receptacle (fig. 33A–B). The accessory glands of the anterior receptacle are restricted to its base and have thin and long shafts (fig. 33C–D).

NEW RECORDS: **ARGENTINA: Buenos Aires:** Isla Martín García, riparian forest, June 06, 2004, to June 08, 2004, C. Scioscia et al., 1♀ (MACN-AR 26075 PBI_OON 15082); San Pedro: Reserva Municipal Vuelta de Obligado, barranca del Paraná, −33.59722°, −59.80944°, Oct. 11, 2009, N. López, C. Grismado, N. Olejnik, and I. Crudele coll., 1♂ (MACN-AR 24301 PBI_OON 15014). **Entre Ríos:** Dept. Colón: P. Nac. El Palmar, Arroyo Los Loros, −31.861746° −58.20934°, 10 m, Aug. 07, 2011, Ramírez et al., MACN-Ar, 1♂ (MACN-Ar 28003 PBI_OON 42122); same collectors, −31.86534° −58.23745°, stones, grassland with palms and low forest, 22 m, Aug. 06, 2011, to Aug. 08, 2011, 1♀ (MACN-Ar 28163 PBI_OON 42003), 1♀ (MACN-Ar 27990 PBI_OON 42103), 2♀ (MACN-Ar 27991 PBI_OON 42105), 2♂ (MACN-Ar 27993 PBI_OON 42106), 5♀ (MACN-Ar 27993 PBI_OON 42106), 3♀ (MACN-Ar 27992 PBI_OON 42109); same collectors, Sector Sur, −31.88768° −58.31186°, 30 m, Aug. 07, 2011,



Map 2. Records of *Neotrops nigromaculatus* (circles), *N. yunga* (triangles) and *N. avalosi* (stars).

1♂ (MACN-Ar 27986 PBI_OON 42117), 1♀ (MACN-Ar 27986 PBI_OON 42117); Dept. Uruguay: Ruta Nac. 14, 7 km E Concepción del Uruguay, −32.483128° −58.308484°, 26 m, Aug. 08, 2011, Ramírez et al., MACN-Ar, 1♀ (MACN-Ar 28164 PBI_OON 42015), 1♀ (MACN-Ar 28019 PBI_OON 42114); Diamante: P.N. Pre Delta, bosque de barranca, −32.12034° −60.62958°, 26 m, May 23, 2011, to May 26, 2011, Rubio G., Izquierdo M. and Piacentini L., 1♂ (MACN-Ar 28247 PBI_OON 42076). Diamante: P.N. Pre Delta, bosque de barranca, −32.12034° −60.62958°, 1♀ (MACN-Ar 28246 PBI_OON 42075).

DISTRIBUTION (map 2): East central Argentina (Buenos Aires, Entre Ríos, and Córdoba provinces) and Uruguay (Rocha and Lavalleja), but see below, the comment under *N. avalosi*.

Neotrops yunga, new species
Figures 34–36, 40C–D; map 2

TYPES: Male holotype and female paratype from Argentina: Jujuy Province: Parque Nacional Calilegua, Seccional Aguas Negras, leaf litter, 605 m, −23.76194°, −64.85111°, Dec. 06–11, 2008, C. Grismado, M. Izquierdo, F. Labarque, G. Rubio, M. Burger, P. Michalik, P. Carrera (MACN-Ar 17988 PBI_OON 14889 and MACN-Ar 17720 PBI_OON 14883 respectively). Deposited in MACN-Ar.

ETYMOLOGY: The specific name refers to the Yungas clouded forests of the northwestern Argentina.

DIAGNOSIS: Males share with those of *N. nigromaculatus* and *N. rubioi* the dorsal sclerotized stripe on the abdomen (figs. 34A,

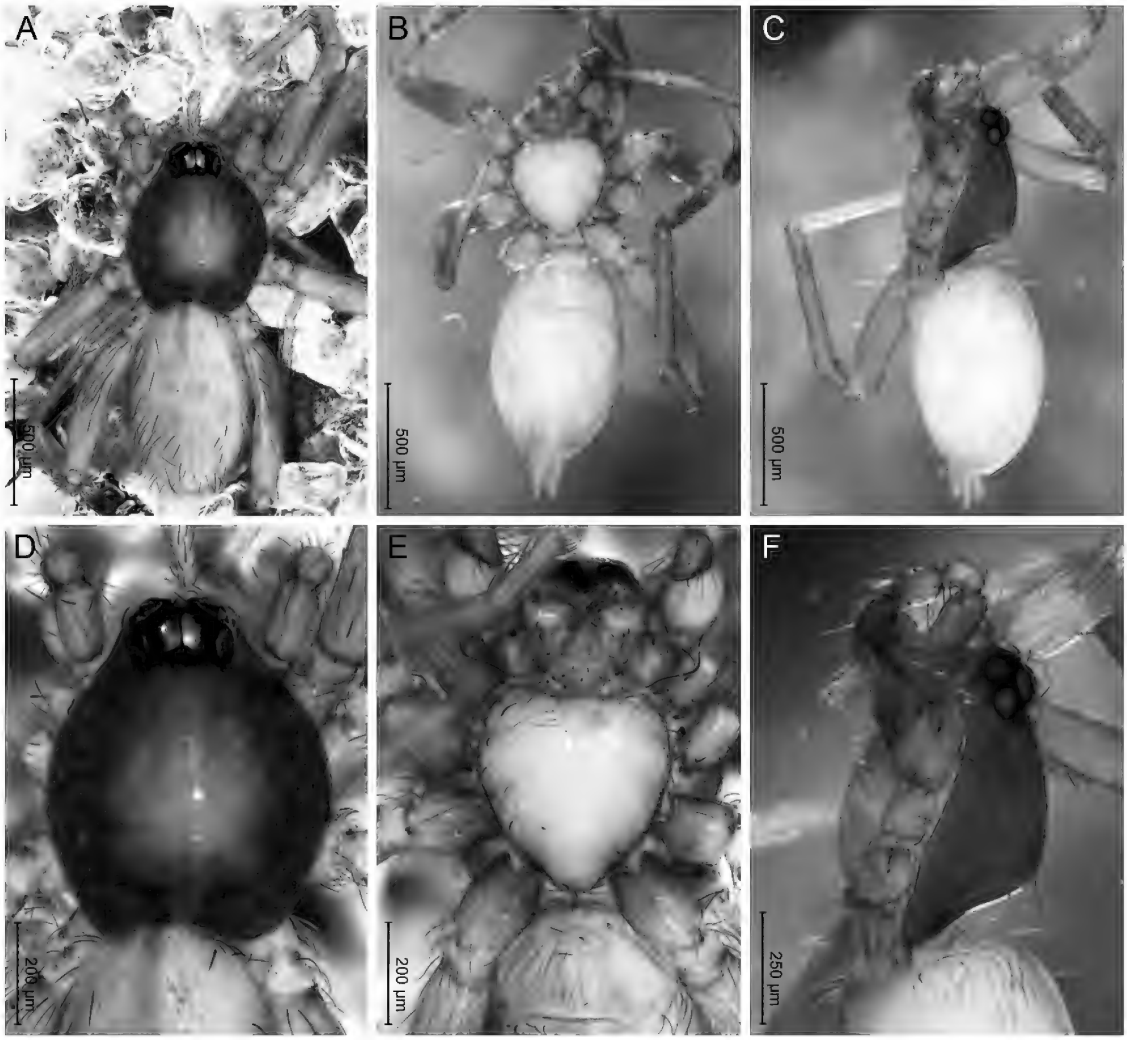


Fig. 34. *Neotrops yunga*, new species, male (**A, D–E,** PBI_OON 14889, **B–C, F,** PBI_OON 14765). **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

D, 35A), but differ by the more widened, almost translucent conductor (figs. 40D, 35B–D). Females also resemble those of *N. nigromaculatus*, but the anterior receptacle is basally narrow and abruptly widened distally (figs. 36H, 40C).

DESCRIPTION: MALE (holotype, PBI_OON 14889). Total length 1.60. **Cephalothorax:** Carapace brown, ovoid in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to between 0.5 and 0.75 times its maximum width; lateral margin straight; nonmarginal pars cephalica setae dark, needlelike, scattered; nonmarginal pars thoracica setae dark, needlelike; marginal setae dark, needlelike (fig. 34A, C, D, F). Clypeus setae absent. Eyes all subequal, ALE circular, PME oval, PLE oval; posterior eye row procurved from front; ALE separated by their radius to diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum (fig. 34E) as long as wide, yellow-brown, anterior margin unmodified, posterior margin extending posteriorly beyond anterior

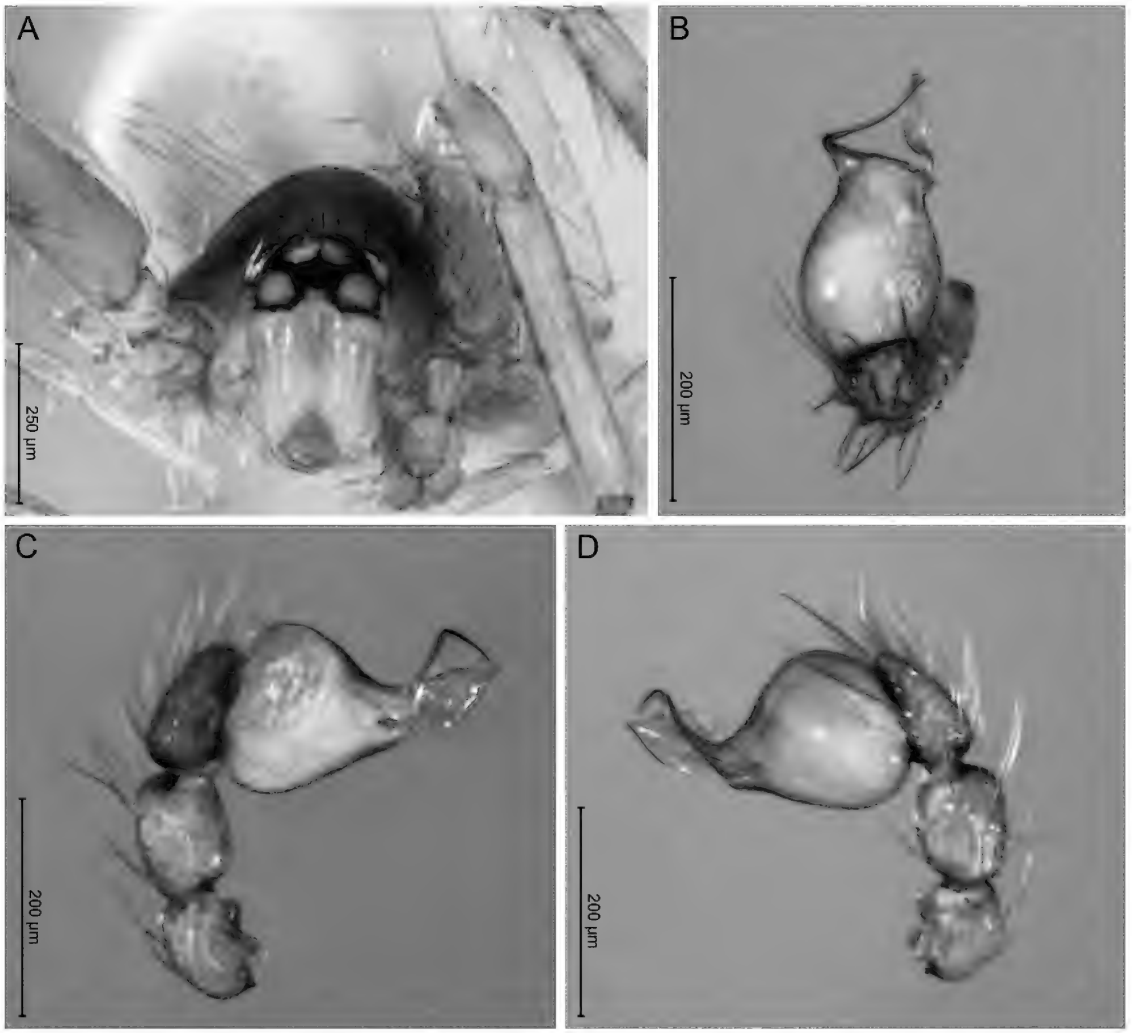


Fig. 35. *Neotrops yunga*, new species, **A,** male PBI_OON 14765, **B–D,** male PBI_OON 14889). **A.** Carapace, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

edges of coxae IV as single extension; setae sparse, densest laterally. Mouthparts: chelicerae, endites, and labium yellow-brown, cheliceral setae dark, evenly scattered. Labium anterior margin indented at middle; with one or two setae on anterior margin. Endites distally not excavated, anterior part of each endite less sclerotized, projecting anteriorly as a membranose lobe, with distolateral pointed projections (fig. 34E). **Abdomen:** Dorsum pale white, without color pattern, with an anterodorsal brown sclerotized stripe, reaching around one third of its length; surface smooth (figs. 34A, C, 35A). Postepigastric scutum yellow-brown. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. Spinnerets: ALS: cylindrical, pale; PMS: pale; PLS: pale, the longest. **Legs:** Yellow-brown; femur IV not thickened, same size as femora I–III. Leg spination: leg I: femora pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora pv0-0-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d1-1-0, tibiae p1-0-1, v0-0-2; leg IV: femora d1-1-0, tibiae r1-0-0, v0-1-1ap, metatarsi d0-0-1, p0-0-1, r1-0-1, v1-2ap. Trichobothria not examined. **Genitalia** (figs. 35B–D, 40D): Palp

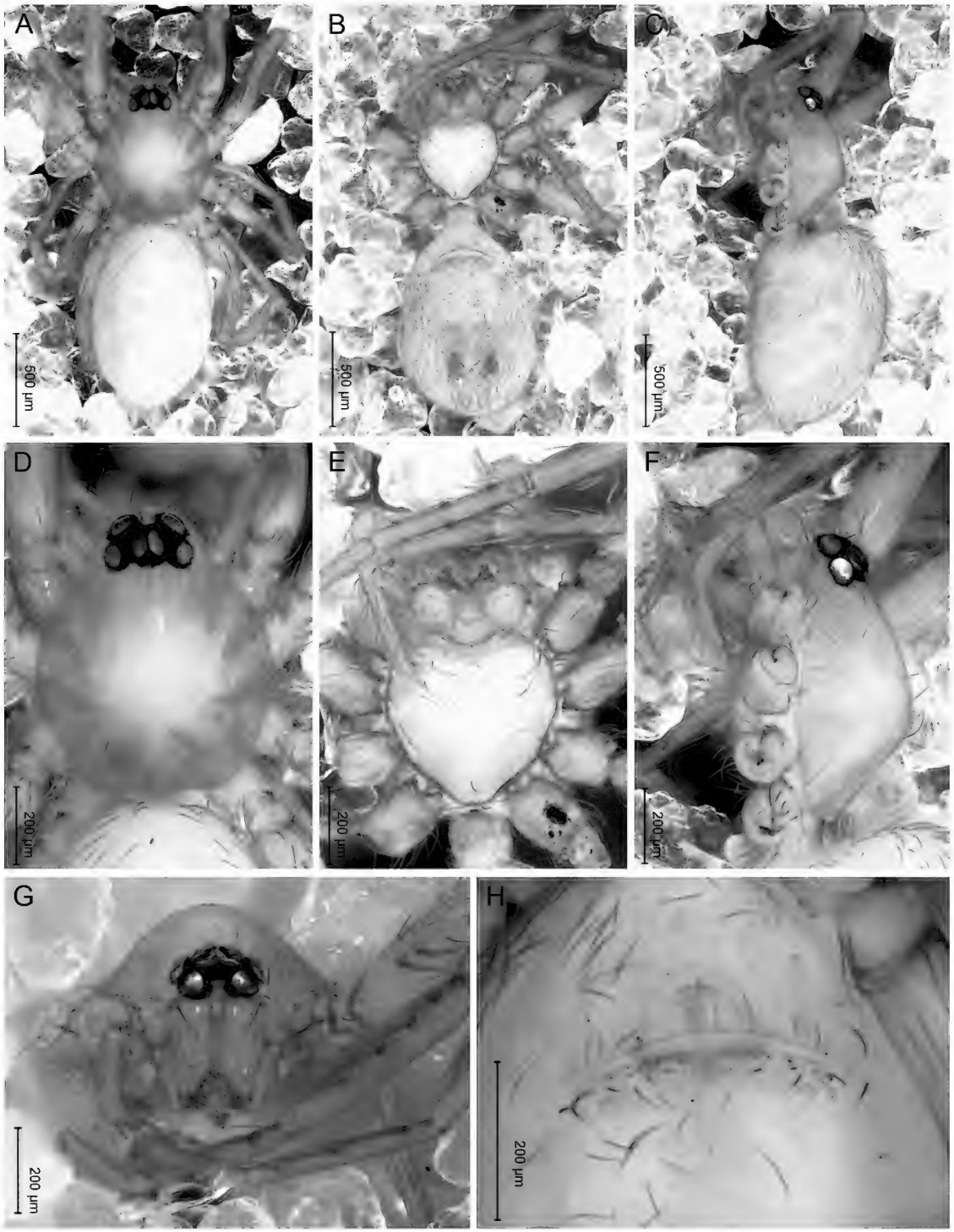


Fig. 36. *Neotrops yunga*, new species, female PBI_OON 14883. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Same, anterior view. **H.** Epigynum, ventral view.

proximal segments orange-brown; femur normal size, two or more times as long as trochanter; cymbium orange-brown, ovoid in dorsal view, not fused with bulb; bulb orange-brown, 1 to 1.5 times as long as cymbium, stout, tapering apically, distal prolateral conductor translucent, lamellar, widened distally, touching the darkened embolus.

FEMALE (paratype, PBI_OON 14883). Total length 1.84. As in male except as noted. **Cephalothorax:** Carapace yellow-brown (fig. 36D), broadly oval in dorsal view; nonmarginal pars cephalica setae dark, needlelike. Clypeus setae, dark, needlelike, two long setae forwardly directed. Sternum: precoxal triangles present; setae dark. Labium elongated hexagon; with six or more setae on anterior margin. Palp spines absent. **Abdomen:** Dorsum lacks the anterodorsal brown sclerotized stripe of the male (fig. 36A). Postepigastric area setae dark, needlelike. Spinnerets: ALS: cylindrical, pale, longest; PMS: pale; PLS: pale, conical. **Legs:** Patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora d0-1-0, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora d0-1-0, p0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d1-1, tibiae p1-1, r1-1, v0-1-2ap, metatarsi p1-1, r1-1, v1-0-2ap; leg IV: femora d1-1, tibiae p1-1-0, r0-0-1, v0-1-1ap, metatarsi d0-0-1-1, r0-1-0, v0-0-1ap. **Genitalia** (figs. 36H, 40C): Anterior receptacle visible through cuticle in ventral view. Dorsal view: anterior receptacle with a thin, long stalk and abruptly widened anterior tip. Accessory glands present on base and stalk. Posterodorsal plate nearly circular, large, covering dorsally the anterior receptacle.

OTHER MATERIAL EXAMINED: **ARGENTINA: Jujuy:** same data as the types, 1♀ (MACN-AR 17725 PBI_OON 14885); same locality, 1100 m, Oct. 05, 1997, to Oct. 07, 1997, Ramírez and Compagnucci, 1♂ (MACN-AR 15374 PBI_OON 14765); 850 m, −23.74277°, −64.85361°, Oct. 20, 1994, J. Carpenter, D. Agosti, 1♀ (AMNH PBI_OON 1863); **Salta:** Manuel Elordi, Jan. 01, 1950, M. Birabén, 1♂, 1♀ (MLP 134 PBI_OON 14934); Orán, Dec. 01, 1950, M. Birabén, 1♀ (MLP 134 PBI_OON 14933).

DISTRIBUTION: Jujuy and Salta provinces, in northwestern Argentina (map 2).

NATURAL HISTORY: The type specimens were collected sifting leaf litter in a lower-elevation montane forest.

Neotrops rubioi, new species
Figures 37–39, 40E–F; map 1

TYPES: Male holotype (MACN-Ar 30117 PBI_OON 42559), two female and three male paratypes (MACN-Ar 28228 PBI_OON 43357) from Argentina: Misiones: Depto. Oberá, Campo Ramón: Refugio de Selva y Centro de Investigaciones Antonia Ramos (CIAR), Sector Casa de Piedra −27.44605° −54.94118°, 125 m, May 31, 2011, to June 03, 2011, Rubio G., Izquierdo M., Piacentini L., and Adilardi, R. Deposited in MACN-Ar.

ETYMOLOGY: The specific name is a patronymic in honor of Gonzalo D. Rubio (MACN), one of the collectors of the type series and many other oonopids in Argentina.

DIAGNOSIS: Males share with those of *N. nigromaculatus* and *N. yunga* the dorsal sclerotized stripe on the abdomen (figs. 37A, D, 38A), but differ by the orange coloration of the carapace, and by the small, gently curved, distally widened translucent conductor, which is not undulated (as in *N. nigromaculatus*) and is narrower than in *N. yunga* (figs. 38B–D, 40F). Females are very similar to those of *N. nigromaculatus*, but seem to have a more truncate tip of the anterior receptacle; the posterodorsal plate is relatively small, not reaching to the tip of the anterior receptacle (fig. 40E). This species can be also separated from *N. nigromaculatus* by its smaller size.

DESCRIPTION: MALE (holotype, PBI_OON 43357). Total length 1.32. **Cephalothorax:** Carapace orange, broadly oval in dorsal view (fig. 37D), pars cephalica slightly elevated in lateral view, anteriorly narrowed to less than half their maximum width; lateral margin straight; nonmarginal pars cephalica setae dark, needlelike; nonmarginal pars thoracica setae dark, needlelike; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes all subequal, ALE circular, PME oval, PLE oval; posterior eye row procurved from front; ALE separated by more than their diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less

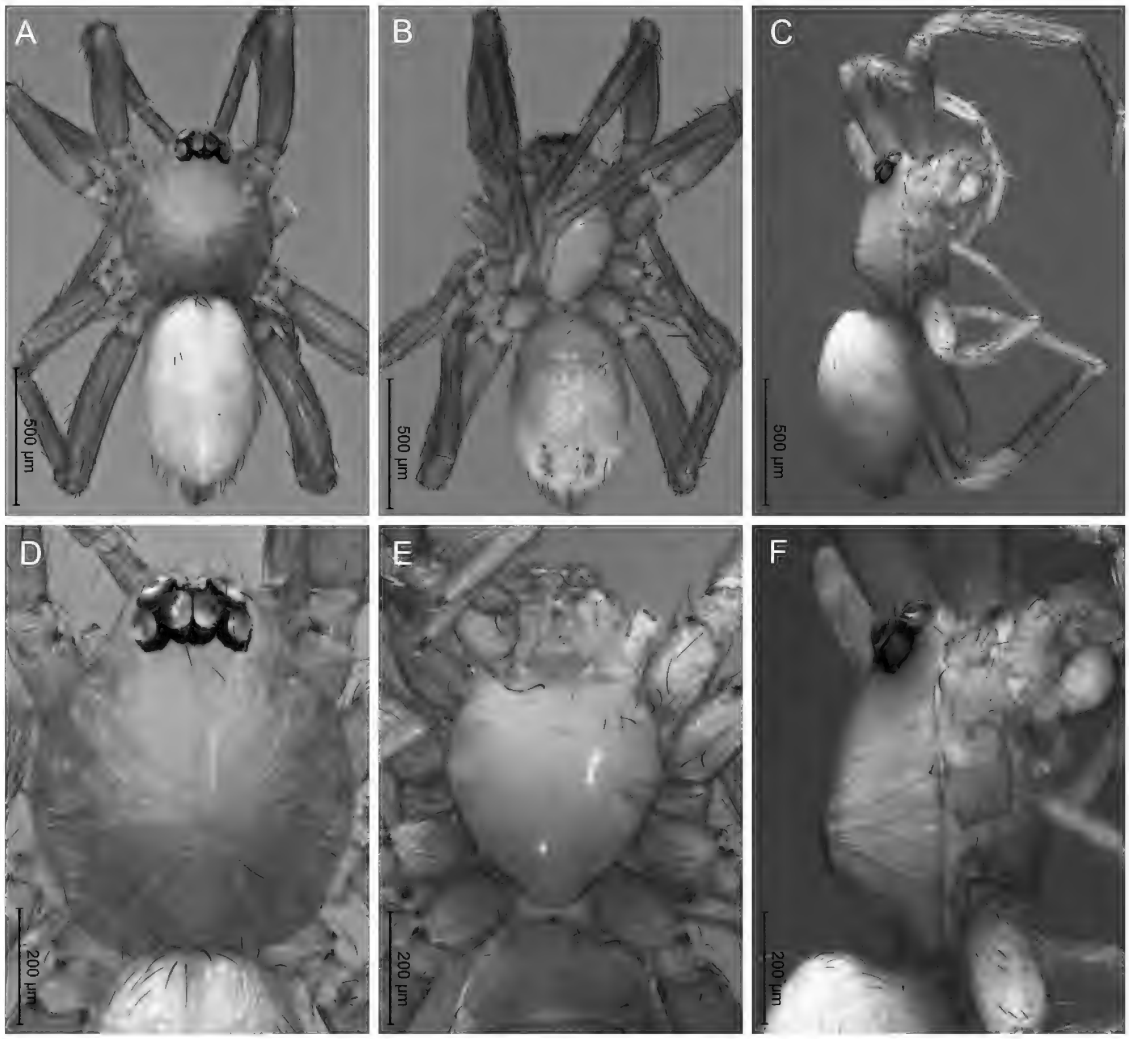


Fig. 37. *Neotrops rubioi*, new species, male PBI_OON 43357. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

than PME radius. Sternum orange, longer than wide, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV; setae sparse, evenly scattered (fig. 37E). Mouthparts: chelicerae, endites, and labium pale orange. Cheliceral setae light, evenly scattered. Labium anterior margin indented at middle; with six or more setae on anterior margin. Endites distally not excavated, anteromedian tip unmodified (fig. 37E). **Abdomen:** Dorsum white. Book lung covers elliptical. Abdominal dorsal stripe narrow, weakly sclerotized, pale orange, without color pattern, covering less than 1/2 of abdomen length, less than 1/4 abdomen width, very narrow, with irregular margins; middle surface smooth, sides smooth (figs. 37A, D, 38A). Postepigastric scutum pale orange. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:** Orange; femur IV not thickened, same size as femora I–III. Leg spination: leg I: femora pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora d1, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d1-1, tibiae

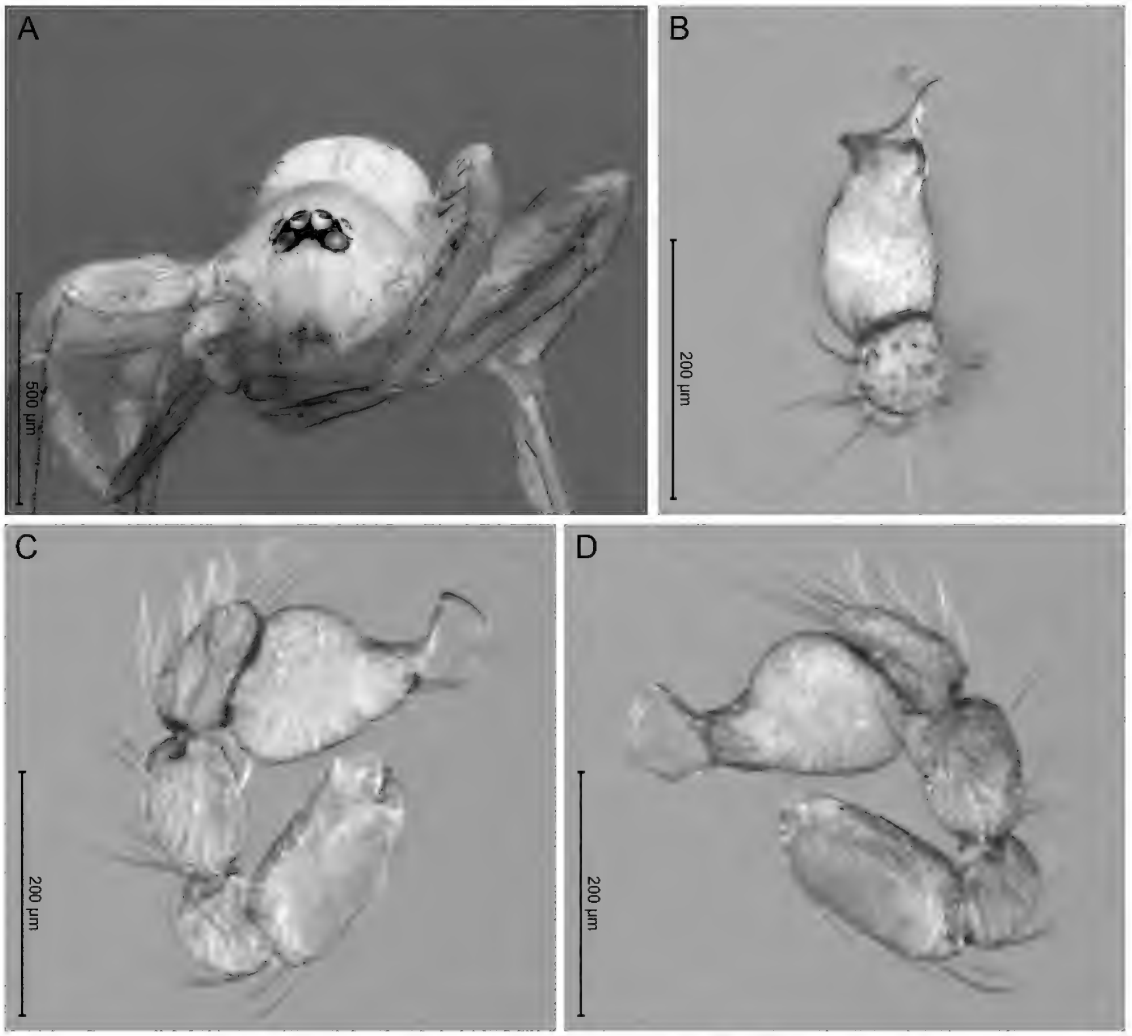


Fig. 38. *Neotrops rubioi*, new species, male PBI_OON 43357. **A.** Habitus, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

d1, p1-1ap, r1-1, v1ap, metatarsi d0-0-1, r0-1, v2ap; leg IV: femora d1-1, tibiae d0-1, p1-1ap, v1ap, metatarsi d0-0-1, p1-1, r1-1, v1-2ap. Trichobothria not examined. **Genitalia:** Palp proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium yellow, ovoid in dorsal view, not fused with bulb; bulb pale orange, 1 to 1.5 times as long as cymbium, stout, tapering apically, conductor with distally expanded laminar extension; gently curved dorsally; embolus dark (figs. 38B–D, 40F).

FEMALE (paratype, PBI_OON 43357). Total length 1.74. As in male except as noted. **Cephalothorax:** Eyes ALE separated by their radius to diameter. Sternum pale orange, precoxal triangles present, setae dark. Labium elongated hexagon. Palp spines absent. **Abdomen:** Postepigastric area setae dark, needlelike. **Legs:** Patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora d1-0-0, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora d1, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d1-1, tibiae d1, p1, r1, v1ap, metatarsi p1-1, r1, v2ap; leg IV: femora d1-0-1, tibiae d1, p1-1, r1-1, v1-1ap, metatarsi d1subap, p0-1, r1-1, v1-1ap. **Genitalia**

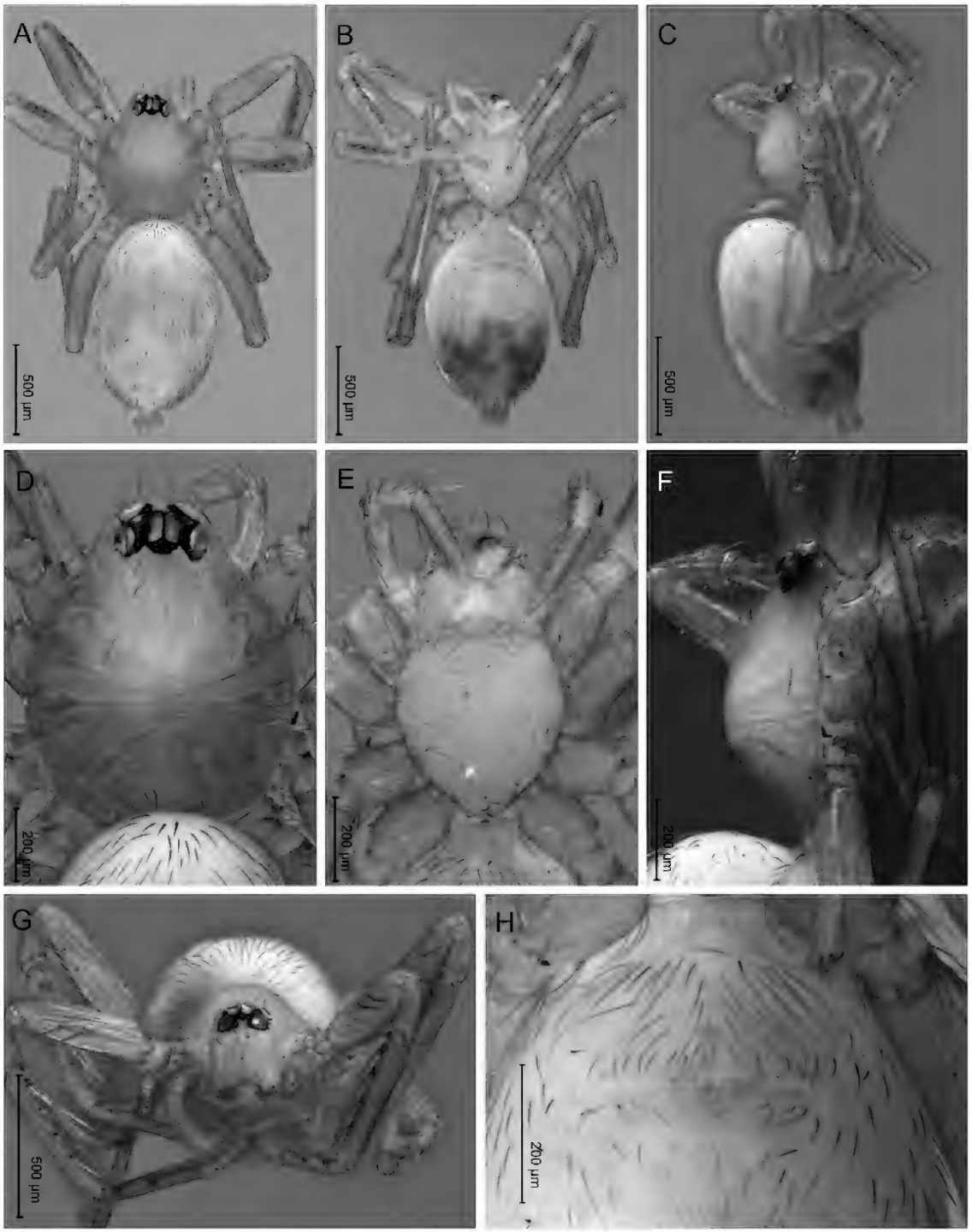


Fig. 39. *Neotrops rubioi*, new species, female PBI_OON 43357. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

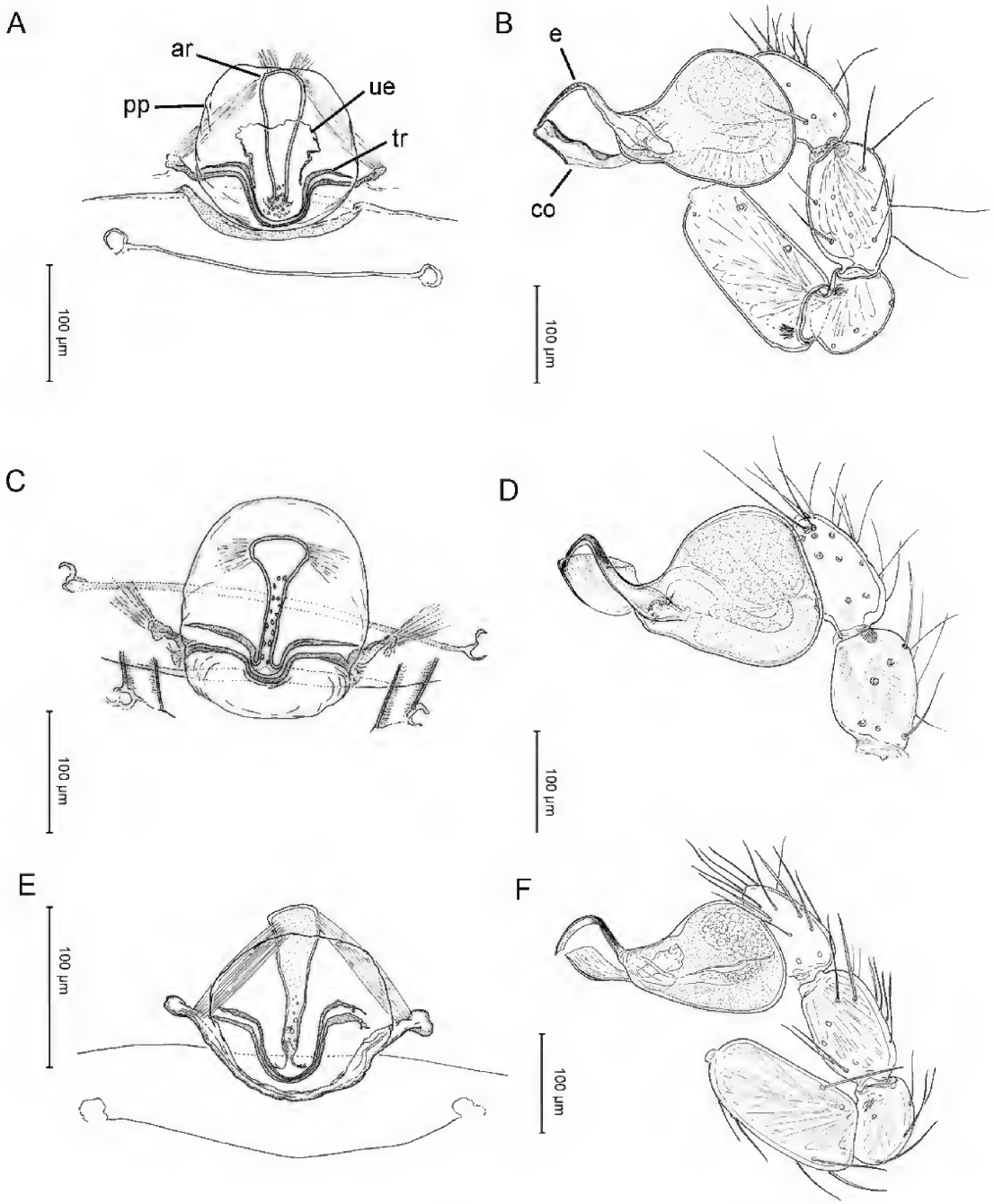


Fig. 40. *Neotrops* spp. genitalia, cleared. **A–B,** *Neotrops nigromaculatus* (Mello-Leitão), **C–D,** *N. yunga,* new species, **E–F,** *N. rubioi*, new species. **A.** Internal female genitalia, dorsal view (PBI_OON 14975), **B.** Male palp, retrolateral view (PBI_OON 14797), **C.** Internal female genitalia, dorsal view (PBI_OON 14885), **D.** Male palp, retrolateral view (PBI_OON 14765), **E.** Internal female genitalia, dorsal view (PBI_OON 43357), **F.** Male palp, retrolateral view (PBI_OON 43357). Abbreviations: **ar,** anterior receptacle; **co,** conductor; **e,** embolus; **pp,** posterodorsal plate; **tr,** transverse ridges; **ue,** uterus externus.

(figs. 39H, 40E): Anterior receptacle relatively long, distally expanded, surpassing the anterior border of the posterodorsal plate.

OTHER MATERIAL EXAMINED: **ARGENTINA:** Same data as the types, 1♀ (MACN-Ar 28232 PBI_OON 42038), 1♂ (MACN-Ar 28245 PBI_OON 42072), 2♂, 2♀ (MACN-Ar 28244 PBI_OON 42073), 1♂ (MACN-Ar 28231 PBI_OON 43376); same locality, date and collectors, Sendero del bosque cercano a la casa, −27.44445° −54.94064°, 100 m, 1♀ (MACN-Ar 28238 PBI_OON 42070), 2♂, 1♀ (MACN-Ar 28241 PBI_OON 42071). **PARAGUAY: Alto Paraná:** Ecole forestière, échantillon du sol, 12 km S Puerto Presidente Stroessner (currently Ciudad del Este), June 25, 1984, C. Dlouhy, 1♂, 1juvenile (MHNG PBI_OON 42067).

DISTRIBUTION: Misiones Province, in northwestern Argentina, and Alto Paraná Department, Paraguay (map 1).

NATURAL HISTORY: Unknown.

Neotrops pombero, new species
Figures 41–45, 53A–B; map 3

TYPES: Male holotype from Argentina: Misiones: Parque Nacional Iguazú, área Cataratas, Dec. 11, 1999, to Dec. 16, 1999, M. Ramírez and L. Lopardo (MACN-Ar 15357, PBI_OON 14794), one female paratype from the same Park: Cataratas del Iguazú: Isla San Martín, Nov. 01, 1986, M. Galiano (MACN-Ar 15360 PBI_OON 14789), one male paratype from Misiones: Santa María, Oct. 01, 1953, De Carlo, R. Schiapelli, Viana, M. Galiano (MACN-Ar 20066 PBI_OON 14927), and one female paratype from Misiones: San Pedro: Parque Provincial Cruce Caballero, NE San Pedro, Oct. 27, 1995, to Oct. 29, 1995, M. Ramírez (MACN-Ar 15354 PBI_OON 14791). Deposited in MACN-Ar.

ETYMOLOGY: The Pombero is the most popular goblin in the mythology of the northeastern Argentina. The specific epithet is an allusion to the goblin spiders.

DIAGNOSIS: Males resemble *N. lorenae* by the shape of the conductor, but differ by the straighter dorsal outline of the bulb in lateral view, and by having the conductor with a ventral laminar projection accompanying all its length (figs. 44E, 53B). Females are recognized by the simple, Y-shaped anterior receptacle (fig. 53A).

DESCRIPTION: MALE (holotype, PBI_OON 14794). Total length 1.40. **Cephalothorax:** Carapace (fig. 41D, F) orange, broadly oval in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to less than half their maximum width; lateral margin straight; nonmarginal pars cephalica setae dark, needlelike, in three rows; nonmarginal pars thoracica setae dark, needlelike; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes PME largest, all eyes circular; posterior eye row procurved from front; ALE separated by their radius to diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum as long as wide, pale orange, anterior margin unmodified, posterior margin extending posteriorly beyond anterior edges of coxae IV as single extension (fig. 41E); setae sparse, evenly scattered. Mouthparts: chelicerae, endites, and labium pale orange. setae dark, evenly scattered. Labium anterior margin indented at middle; with six or more setae on anterior margin. Endites with a lateral excavation and a membranous anterior part, rolled, forming a kind of tube (fig. 44C). **Abdomen:** Dorsum pale white. Book lung covers round. Postepigastric scutum pale orange. Spinneret scutum absent. Dorsum setae dark, needlelike. Spinnerets (fig. 45B–E): ALS: with four spigots; PMS: with two spigots; PLS: with four spigots. **Legs:** Pale orange; femur IV not thickened, same size as femora I–III. Leg spination: leg I: femora d0-1-0, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora d0-1-0, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d1-0-1, tibiae p1-1, v0-0-1, metatarsi p1-0-1, r1-0-0, v0-0-1; leg IV: femora d0-1-1, tibiae d0-1-0, p-1-1, r1-1, v0-0-1, metatarsi p1-0-1, r1-0-1, v0-1-1. Trichobothria not examined. **Genitalia:** Palp proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, not fused with bulb; bulb pale orange, 1 to 1.5 times as long as cymbium, stout, tapering apically, distal part conductor sinuous, partially translucent, with a ventral lamellar extension (figs. 42B–D,

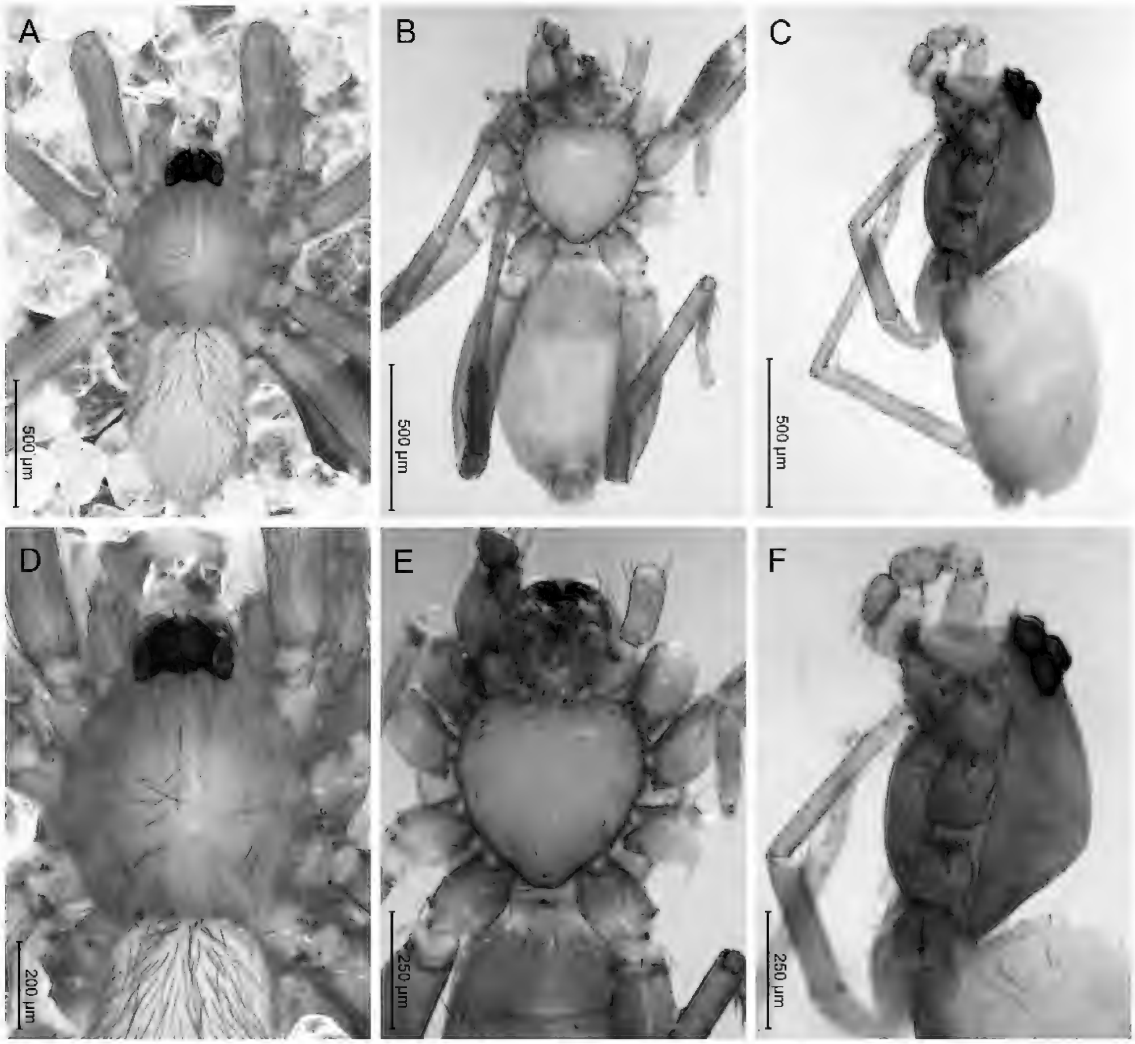


Fig. 41. *Neotrops pombero*, new species, male (**A, D,** PBI_OON 14794, **B–C, E–F,** PBI_OON 14769). **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

53B; the gland opening is a narrow slit on the prolateral side; embolus dark, curved to the prolateral side (fig. 44E).

FEMALE (paratype, PBI_OON 14789). Total length 1.85. As in male except as noted. **Cephalothorax:** Carapace pale orange; non-marginal pars cephalica setae in one row. Sternum precoxal triangles present; setae dark. Labium elongated hexagon. Palp spines absent. **Abdomen:** Postepigastric area setae dark, needlelike. Colulus represented only by setae. **Legs:** Patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora d0-1-0, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora d0-1-0, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d0-1-1, tibiae p1-1, r1-1, v0-1-2ap, metatarsi d0-0-1, p1-1, r0-0-1, v0-0-2ap; leg IV: femora d1-0-1; tibiae d0-1-0, p1-0-1, r1-0-0, v1-0-1ap, metatarsi p1-0-1, r1-0-1, v0-0-2ap. **Genitalia:** In ventral view, bifid anterior receptacle visible through cuticle (fig. 43H). Dorsal view: anterior receptacle with two anteriorly directed sclerotized projections and

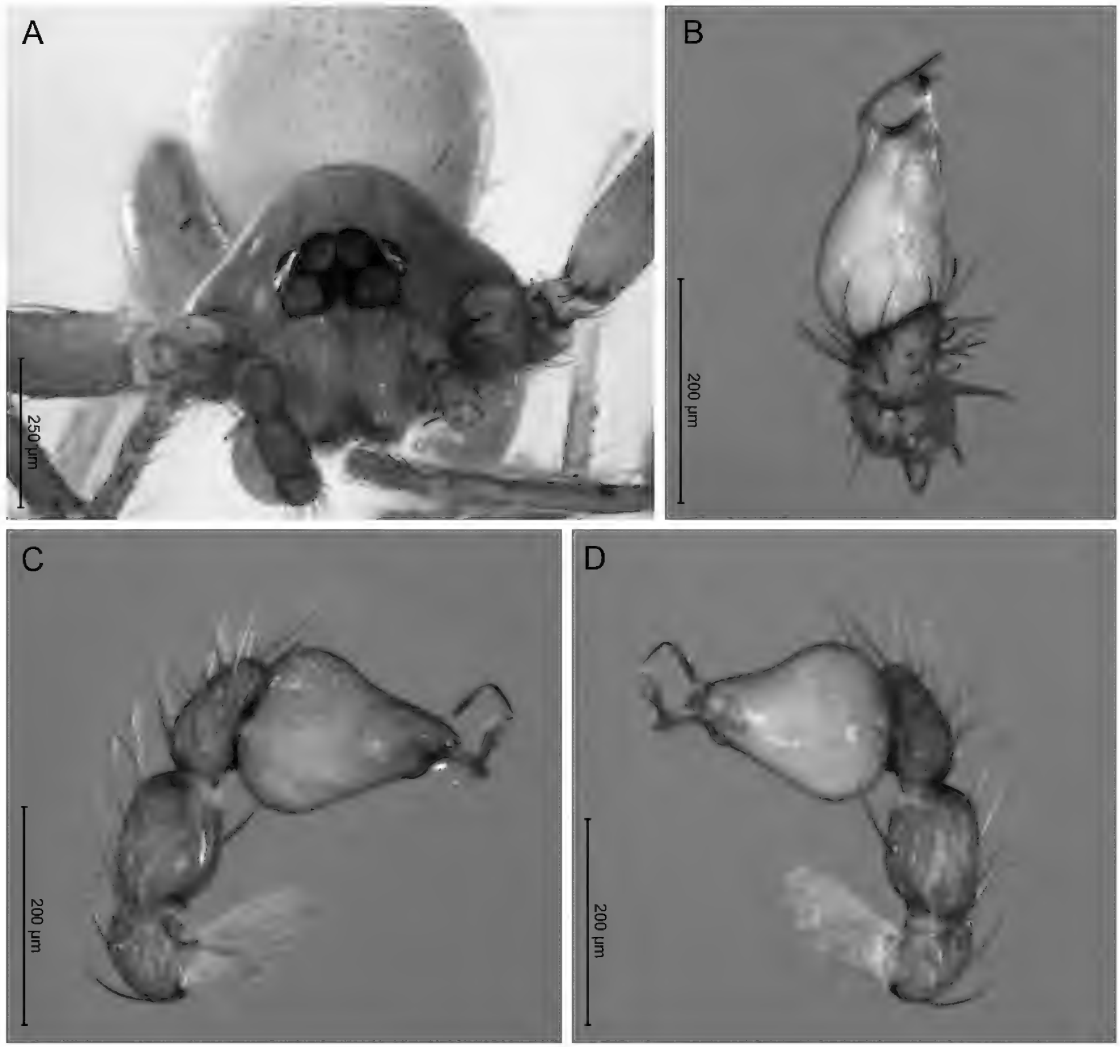


Fig. 42. *Neotrops pombero*, new species, **A,** male PBI_OON 14769, **B–D,** male PBI_OON 14794. **A.** Habitus, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

accessory glands restricted to its base. Posterior plate large, nearly circular, covering anterior receptacle dorsally (fig. 53A).

OTHER MATERIAL EXAMINED: **PARAGUAY: Canindeyú:** Salto del Guairá, "sous l'écorce d'un arbre mort," Oct. 30, 1979, Expédition zoologique du Museúm de Genève, 2♂, 1♀ (MHNG PBI_OON 42057). **ARGENTINA: Misiones:** Parque Nacional Iguazú (−25.680295°, −54.449638°), 186 m, Nov. 07, 2011, G. Rubio, 1♀ (MACN-Ar 28370 PBI_OON 42036); 17 de Octubre, Oct. 01, 1954, 2♂, 1♀, 2 juvenile (MACN-AR 15362 PBI_OON 14805); Cataratas del Iguazú, June 01, 1954, R. Schiapelli, 2♀ (MACN-AR 15353 PBI_OON 14788), Nandu Campgd., Jan. 01, 1991, S., J. Peck, 1♂ (AMNH PBI_OON 1860), Oct. 23, 1995, to Oct. 26, 1995, M. Ramírez, 1♂ (MACN-AR 15350 PBI_OON 14769); Pto. 17 de Octubre, Oct. 01, 1953, De Carlo, R. Schiapelli, Viana, M. Galiano, 4♂, 5 juvenile (MACN 3781 PBI_OON 14787); RP 19 y A°Uruzú, Feb. 06, 1988, Goloboff and Szumik, 1♂, 1juvenile (MACN-AR 15355 PBI_OON 14792); Santa María, June 01, 1960, J.M. Viana, 1♂, 3♀ (MACN-AR 15361 PBI_OON 14795); Depto. Oberá, Campo Ramón: Refugio de Selva y Centro

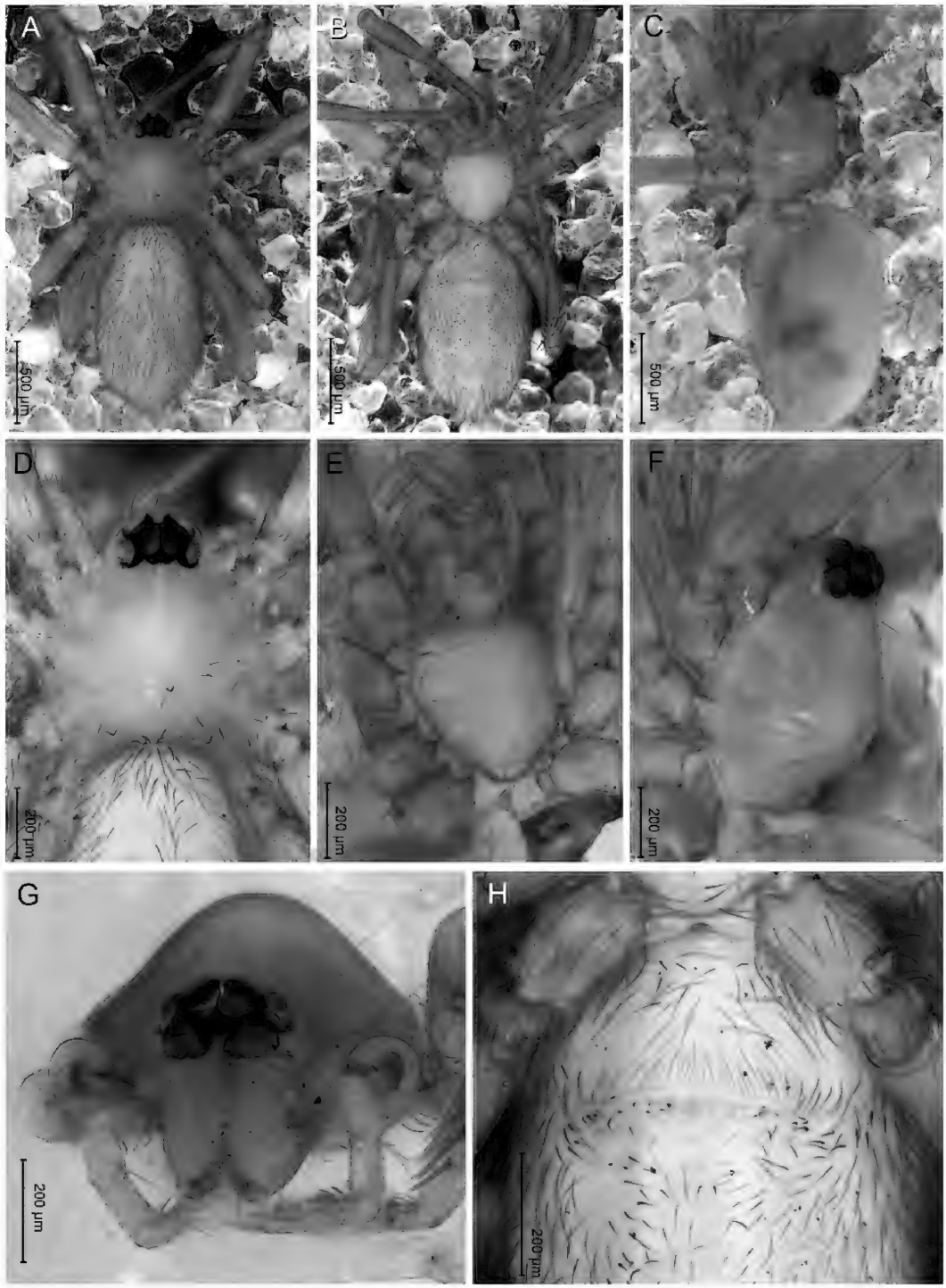


Fig. 43. *Neotrops pombero*, new species, female (**A–B, D, H,** PBI_OON 14789; **C, E–G,** PBI_OON 14768). **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Same, anterior view. **H.** Epigynum, ventral view.

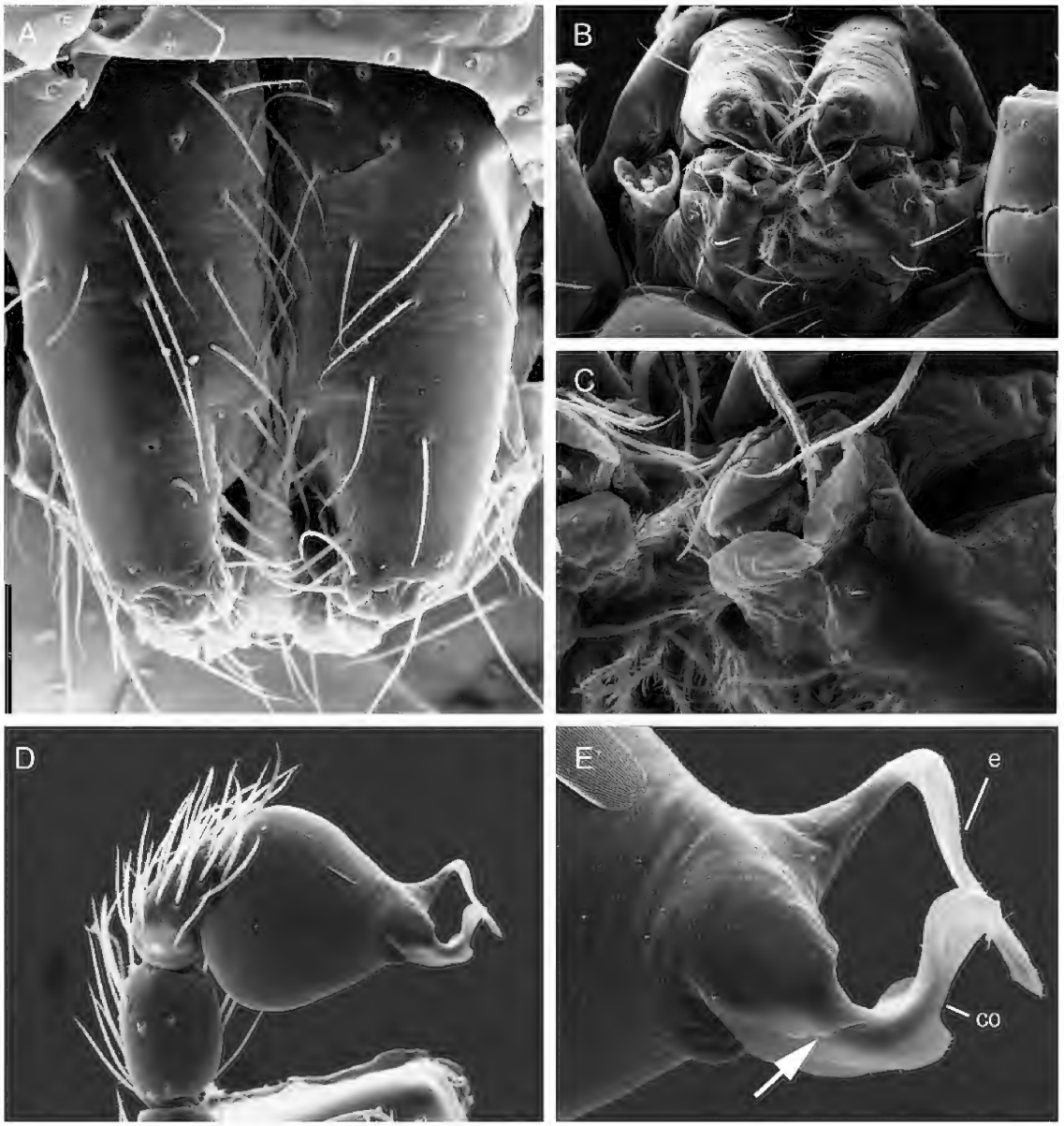


Fig. 44. *Neotrops pombero*, new species, male PBI_OON 14795. **A.** Chelicerae, anterior view. **B.** Mouthparts, ventral view. **C.** Detail of anterior margin of the endite. **D.** Palp, prolateral view. **E.** Same, detail of embolus and conductor. Abbreviations: **co,** conductor (arrow: slit); **e,** embolus.

de Investigaciones Antonia Ramos (CIAR), Sendero del bosque cercano a la casa, −27.44445° −54.94064°, 100 m, May 31, 2011, to June 03, 2011, Rubio G., Izquierdo M., Piacentini L. and Adilardi, R., 1♂ (MACN-Ar 28233 PBI_OON 43378). **Corrientes:** Laguna Brava, Mar. 25, 2001, G. Ávalos, 1♂, 3♀ (CARTROUNNE 2972 PBI_OON 15031); Dec. 19, 2001, Ávalos, Gilberto, 2♂, 1♀ (CARTROUNNE 2969 PBI_OON 30683), June 01, 2001, Ávalos, Gilberto, 1♀, 1juvenile (CARTROUNNE 2967 PBI_OON 30684); Laguna Brava (road to Santa Ana), −27.50000°, −58.70000°, Dec. 12, 2004, Ávalos and Rubio G., 1♂, 3 juvenile (CARTROUNNE PBI_OON

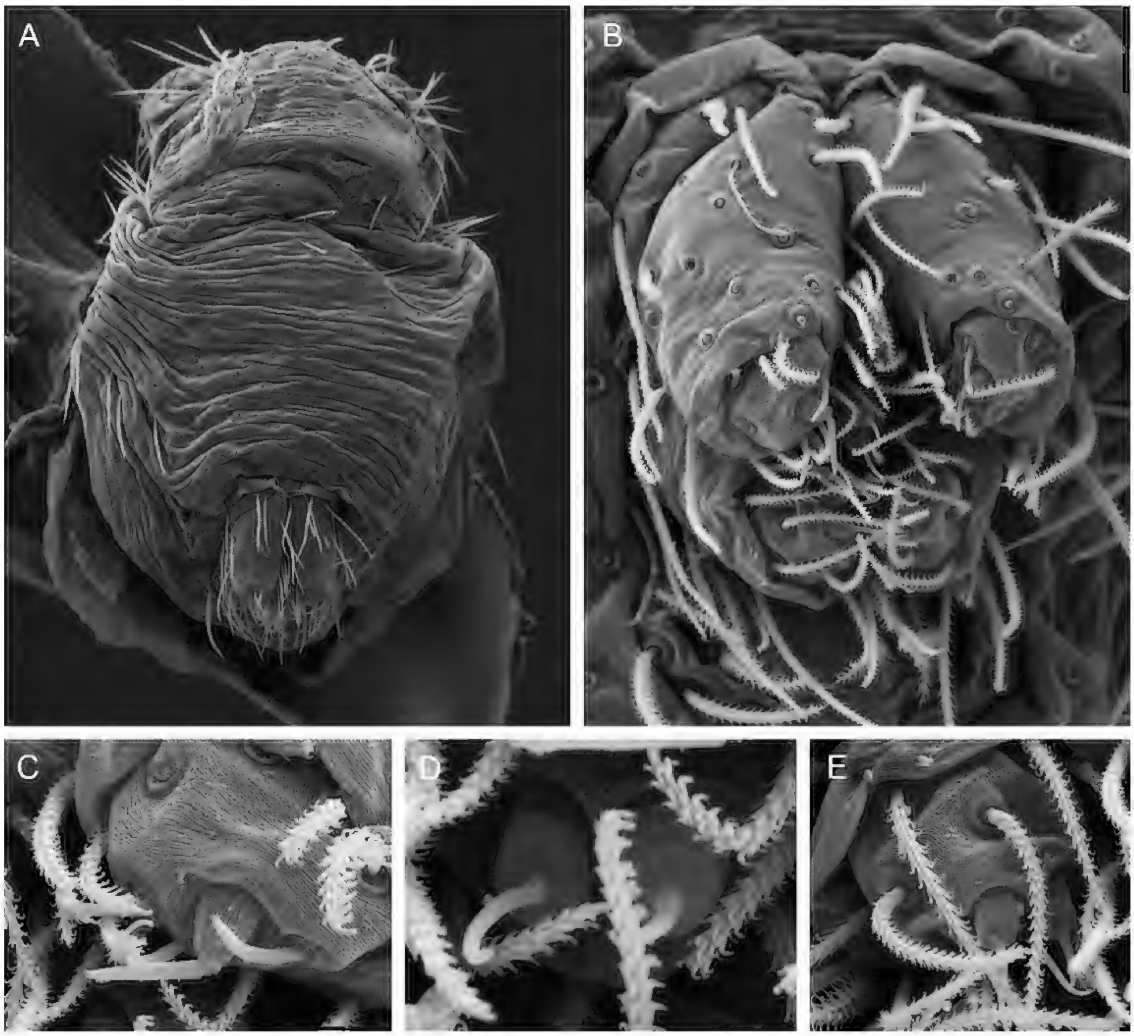
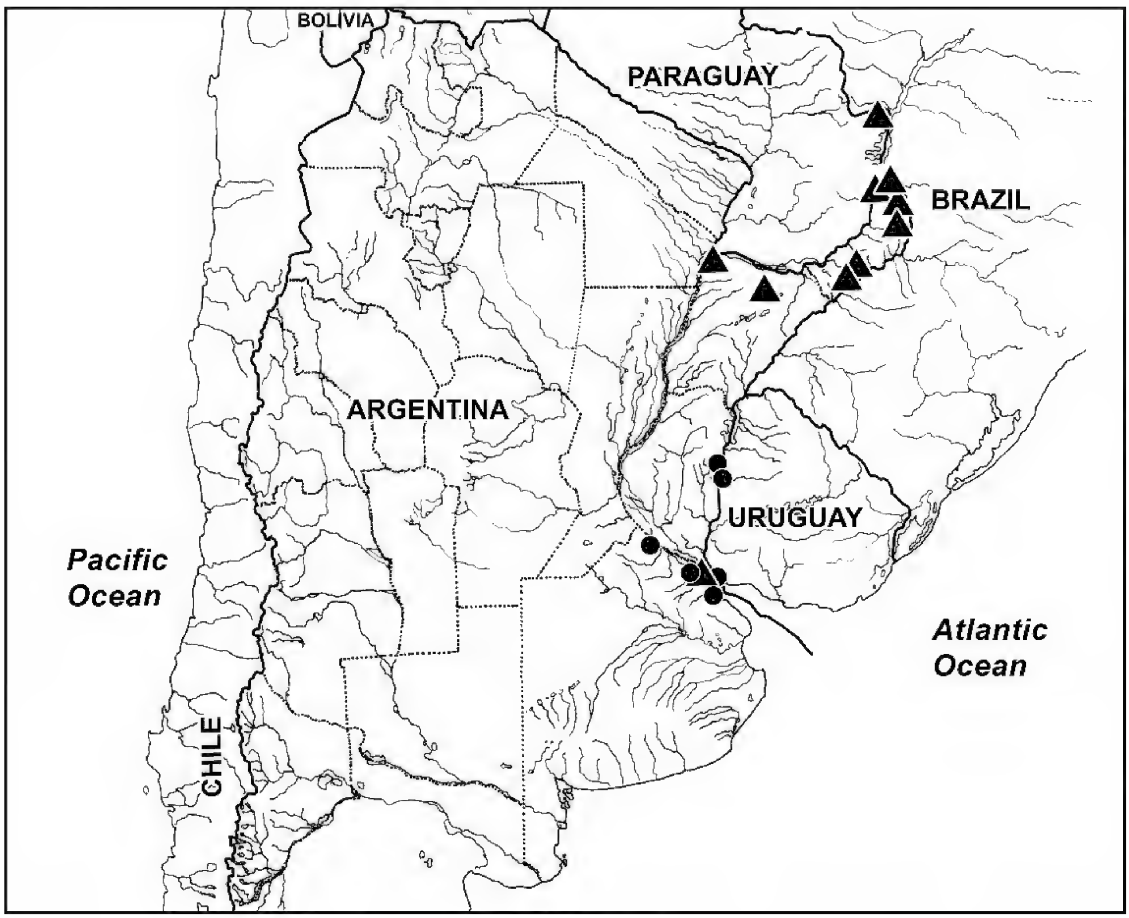


Fig. 45. *Neotrops pombero*, new species, male PBI_OON 14795. **A.** Abdomen, ventral view. **B.** Spinnerets, ventral view. **C.** Anterior lateral spinneret. **D.** Posterior median spinneret. **E.** Posterior lateral spinneret.

30676); Perichon, May 28, 2001, G. Ávalos, 2♂, 1♀ (CARTROUNNE 2970 PBI_OON 15030), Dec. 12, 2004, Ávalos and Rubio G., 5♂ (CARTROUNNE PBI_OON 15032), Dec. 09, 2004, G. Ávalos, 1♂ (CARTROUNNE PBI_OON 15033), Aug. 18, 2010, Gilberto Ávalos and Pablo Ávalos Camino, 2♀, 4 juvenile (CARTROUNNE PBI_OON 30662), Nov. 01, 2001, Ávalos and Rubio G., 1♂, 1♀ (CARTROUNNE 2973 PBI_OON 30663), May 27, 2004, G. Ávalos, 1♀ (CARTROUNNE PBI_OON 30665), Dec. 12, 2004, Ávalos and Rubio G., 1♂, 7♀, 10 juvenile (CARTROUNNE PBI_OON 30680), Dec. 09, 2004, Ávalos and Rubio G., 1♀, 1♂, 2 juvenile (CARTROUNNE PBI_OON 30682), Dec. 12, 2004, Ávalos and Rubio G., 2♀ (CARTROUNNE PBI_OON 30685); Mburucuyá: P.N. Mburucuyá, Sendero Che Roga, hygrophilous forest, −28.00493° −58.03653°, 85 m, May 27, 2011, to May 30, 2011, Rubio G., Izquierdo M. and Piacentini L., 1♂, 1 juvenile (MACN PBI_OON 42095); Iberá, Dec. 19, 2004, Ávalos and Rubio G., 2♂ (CARTROUNNE PBI_OON 30677), 1♂



Map 3. Records of *Neotrops pombero* (triangles) and *N. lorenae* (circles).

(CARTROUNNE PBI_OON 30678), 1♂, 4♀, 1juvenile (CARTROUNNE PBI_OON 30679), 3♂, 3♀, 5 juvenile (CARTROUNNE PBI_OON 30681); San Cayetano: Estación Biológica de Corrientes (EBCo), under trunk, 48 m, −27.55083°, −58.67777°, Nov. 05, 2007, to Nov. 10, 2007, C. Grismado, L. Piacentini, M. Izquierdo, L. Compagnucci, y J. Martínez col., 1♀ (MACN-AR 13172 PBI_OON 14770); Estación Biológica de Corrientes (EBCo), forest, 50 m, −27.54555°, −58.68111°, Nov. 05, 2007, to Nov. 10, 2007, C. Grismado, L. Piacentini, M. Izquierdo, L. Compagnucci, y J. Martínez col., 1♀ (MACN-AR 13485 PBI_OON 14785). **Ciudad Autónoma de Buenos Aires:** Reserva Ecológica Costanera Sur, Área Fuego, −34.60611°, −58.35833°, Aug. 26, 2011, L. Zapata, A. Mamani, and H. Sirolli, 1♂ (MACN-Ar 28156 PBI_OON 42125), 1juvenile (MACN-Ar 28155 PBI_OON 42126), 2♂, 1 juvenile (MACN-Ar 27555 PBI_OON 43197); Bosque de *Tessaria integrifolia*, −34.60472°, −58.34972°, Oct. 24, 2011, L. Zapata, G. Rubio, M. Izquierdo, M. Guala, y C. Grismado, 1♀ (MACN-Ar 28193 PBI_OON 42023); 1♀ (MACN-Ar 28192 PBI_OON 42041); Camino de los sauces: mirador al Canal Sur, −34.61694°, −58.34722°, Oct. 24, 2011, L. Zapata, G. Rubio, M. Izquierdo, M. Guala, y C. Grismado, 1♂, 1 juvenile (MACN-Ar 28196 PBI_OON 42018), 2♂ (MACN-Ar 28197 PBI_OON 42019), 1♂, 2♀ (MACN-Ar 28194 PBI_OON 42020), 6♂, 7♀, 1juvenile (MACN-Ar 28191 PBI_OON 42024), 3♂, 3♀, 1 juvenile (MACN-Ar 28235 PBI_OON

42039), 1♂ (MACN-Ar 28189 PBI_OON 42042).

DISTRIBUTION: Argentina: (Misiones and Corrientes provinces and, at least, one population in Buenos Aires city), and Paraguay (Canindeyú Department) (map 3).

NATURAL HISTORY: The specimen from the EBCo (Corrientes) was collected under a fallen trunk, in a forest. At Reserva Ecológica Costanera Sur (RECS), a few specimens were found in leaf litter in a forest and at the base of *Cortaderia* grasses, but most of them were obtained sifting leaf litter of the "Caña de Castilla" cane (*Arundo donax*) near the margin of a coastal lagoon, permanently connected with Río de la Plata estuary. The ecosystem is composed of recently developed riparian plant communities typical of this region. The large gap between the populations (Misiones and Corrientes and Buenos Aires city, separated by more than 750 km) is remarkable. Ecological surveys carried out by Lorena Zapata and collaborators at the RECS during several years obtained only *N. darwini* until 2011, when some specimens of *N. pombero* were collected for the first time. The largest series at RECS comes from a single place near the Río de la Plata estuary, a biological corridor for fauna coming from northern areas of the Paraná-Plata basin. These data suggest that *N. pombero* could be a recent inmigrant from the north.

Neotrops lorenae, new species
Figures 46–49, 53C–D; map 3

TYPES: Male holotype from Argentina: Buenos Aires Province: La Plata: Paseo del Bosque, under bark of *Eucalyptus* sp., June 14, 2011, J. Barneche (MACN-Ar 27894 PBI_OON 43212). Same data, 1♂ and 2♀ paratypes (MACN-Ar 27898 PBI_OON 43211); deposited in MACN. One ♂ and one ♀ paratypes (MLP PBI_OON 43210); deposited in MLP.

ETYMOLOGY: The specific epithet is a patronym in honor of Lorena Zapata (MACN and Reserva Ecológica Costanera Sur, Buenos Aires), co-collector of this species in Entre Ríos, and of many other oonopids in Argentina.

DIAGNOSIS: Males resemble *N. pombero*, but differ in having a more concave bulb dorsal outline in lateral view, with a more globose basal part, a longer, more curved embolus, and a conductor with a ventral laminar projection more proximal (figs. 47B–D, 53D). Females also resemble to those of *N. pombero* by the Y-shaped anterior receptacle, but differ in having a basal sinuous portion, which forms a dorsal arc, from the ventrally positioned ventral part, and appear as two distinct parts in dorsal view (fig. 53C).

DESCRIPTION: MALE (PBI_OON 43213). Total length 1.74. **Cephalothorax:** Carapace orange, broadly oval in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to less than half the maximum width; lateral margin straight; nonmarginal pars cephalica setae dark, needlelike, scattered; nonmarginal pars thoracica setae dark, needlelike; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes all subequal, ALE circular, PME oval, PLE oval; posterior eye row recurved from front; ALE separated by their radius to diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum as long as wide (fig. 46E), pale orange, anterior margin unmodified, setae sparse, evenly scattered. Mouthparts: chelicerae, endites, and labium pale orange, cheliceral setae dark, evenly scattered. Labium anterior margin indented at middle, with six or more setae. Endites distally not excavated, with a longitudinal sclerotized ridge, anterior and ectal parts of each endite lightly sclerotized (fig. 46E). **Abdomen:** Dorsum pale white. Book lung covers ovoid. Postepigastric scutum pale orange. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:** Pale orange; femur IV not thickened, same size as femora I–III. Leg spination: leg I: femora d1-0-0, pv 0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora d1-0-0, pv 0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d1-1, tibiae d1, p1-1, r0-1, metatarsi p1-1, r0-1; leg IV: femora d1-0-1, tibiae d1, r1-1, metatarsi d1subap, p1-1, r1-1-1. Trichobothria not examined. **Genitalia:** Palp proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, not fused with

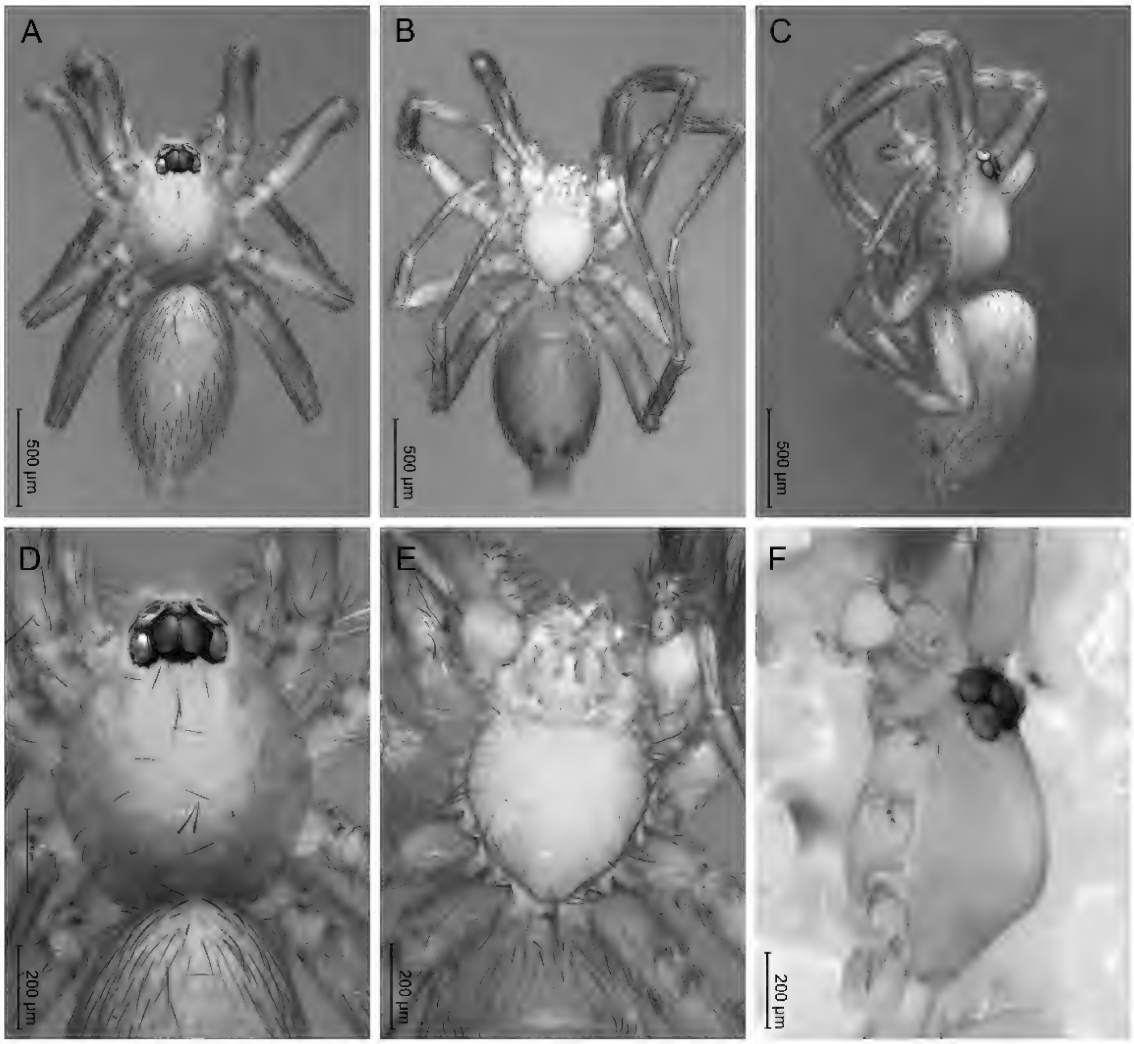


Fig. 46. *Neotrops lorenae*, new species, **A–E,** male PBI_OON 43213, **F,** male PBI_OON 14764. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

bulb; bulb globose, whitish, 1 to 1.5 times as long as cymbium, stout, tapering apically, distal part distally truncated. Conductor with an acute forward-directed process and a ventral expanded lamina (as in fig. 53D); embolus dark.

FEMALE (PBI_OON 43215). Total length 1.90. As in male except as noted. **Cephalothorax:** Sternum setae dark. Palp spines absent. **Abdomen:** Dorsum with paired gray patches under the cuticle dorsally and one longitudinal, larger, along the middle of the venter (fig. 48A–B). Postepigastric area setae dark, needlelike. **Legs:** Patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora d1-0, pv 0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora d1-0, pv 0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d1-1, tibiae p1-1, metatarsi p1-1, v1ap; leg IV: femora d1-0-1, tibiae p1-0-1, r1-0-1, metatarsi p1-1, r1-0-1, v2ap. **Genitalia:** Ventral view: anterior receptacle with two short, anterolateral projections (as a "V") with muscle attachments, its basal part curving outward (ventrally), appears to be of two separate parts in dorsal view (fig. 53C),

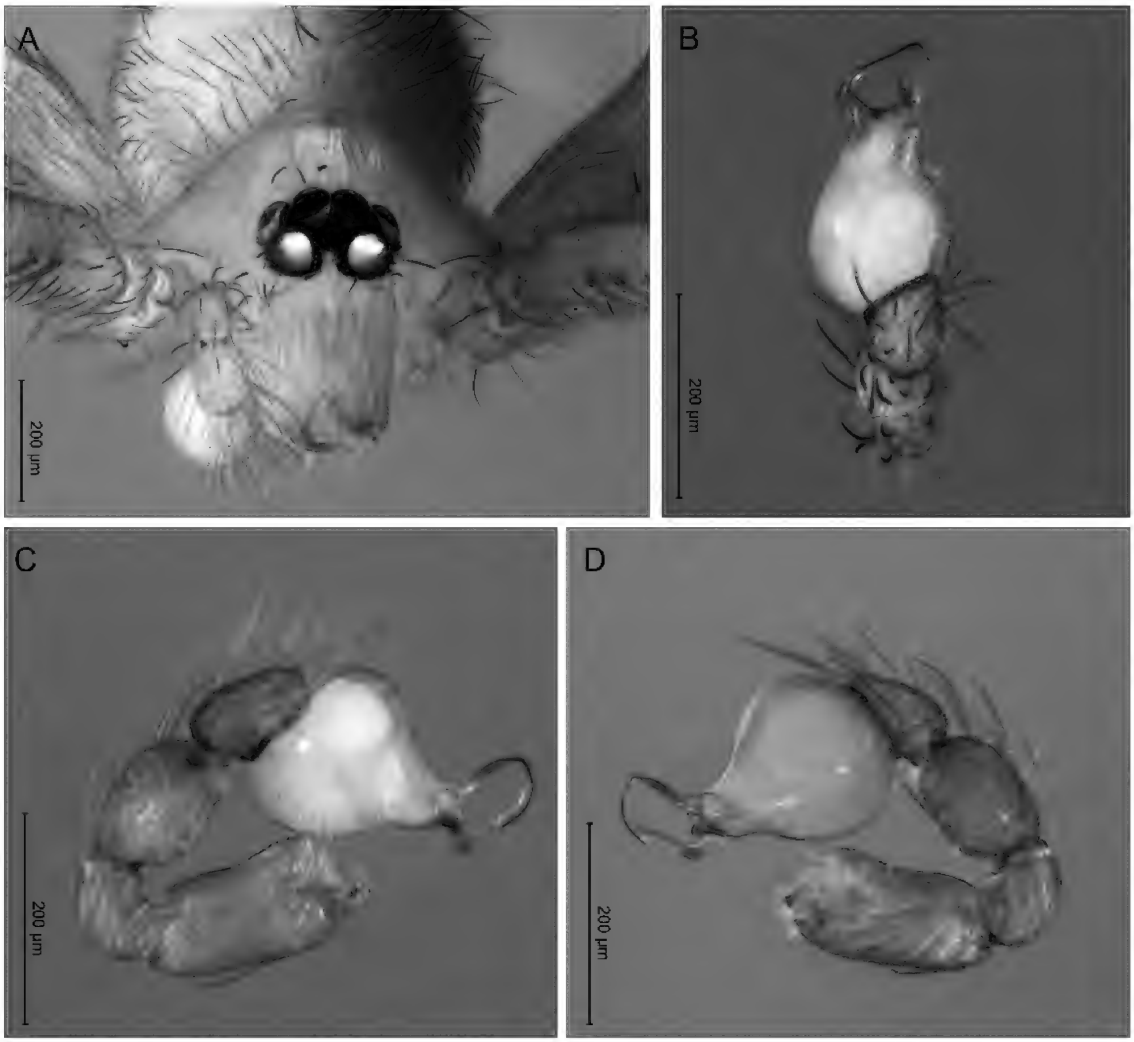


Fig. 47. *Neotrops lorenae*, new species, male PBI_OON 43213. **A.** Habitus, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

the ends of the basal part visible through cuticle as a rounded darker area (fig. 48H). The accessory glands seem to be restricted to the base (fig. 53C), and the V-shaped tip visible through the cuticle (fig. 48H). Posterior plate large, nearly circular, covering dorsally the entire anterior receptacle.

OTHER MATERIAL EXAMINED: **ARGENTINA: Buenos Aires:** Same data as the types, 1♂ (MLP PBI_OON 43209), 1♂ (MACN-Ar 27900 PBI_OON 43213), 1♂, 2♀ (MACN-Ar 27895 PBI_OON 43214), 3♀ (MACN-Ar 27899 PBI_OON 43215), 1♀ (MACN-Ar 28372 PBI_OON 43217), 1♂ (MACN-Ar 28371 PBI_OON 43218); Escobar: Paraná de Las Palmas, under bark, Mar. 24, 2011, Porta, A., 1♀, 1juvenile (MACN-AR 27483 PBI_OON 43196); Gobernador Castro, Mar. 19, 1983, Zanetic and Goloboff, 1♂ (MACN-AR 15372 PBI_OON 14804), 2♀ (MACN-AR 15372 PBI_OON 14804); Tigre: Dique Luján, Sept. 26, 1982, Goloboff and Ramírez, 4♂, 6♀ (MACN-AR 15364 PBI_OON 14764), Río Luján y Guayracá, June 01, 1982, M. Ramírez, 1♂, 5♀ (MACN-AR 27478 PBI_OON 43187), Isla Martín García, May 25, 1990, M. Ramírez, 1♂ (MACN-AR 15369 PBI_OON 14800). **Entre**

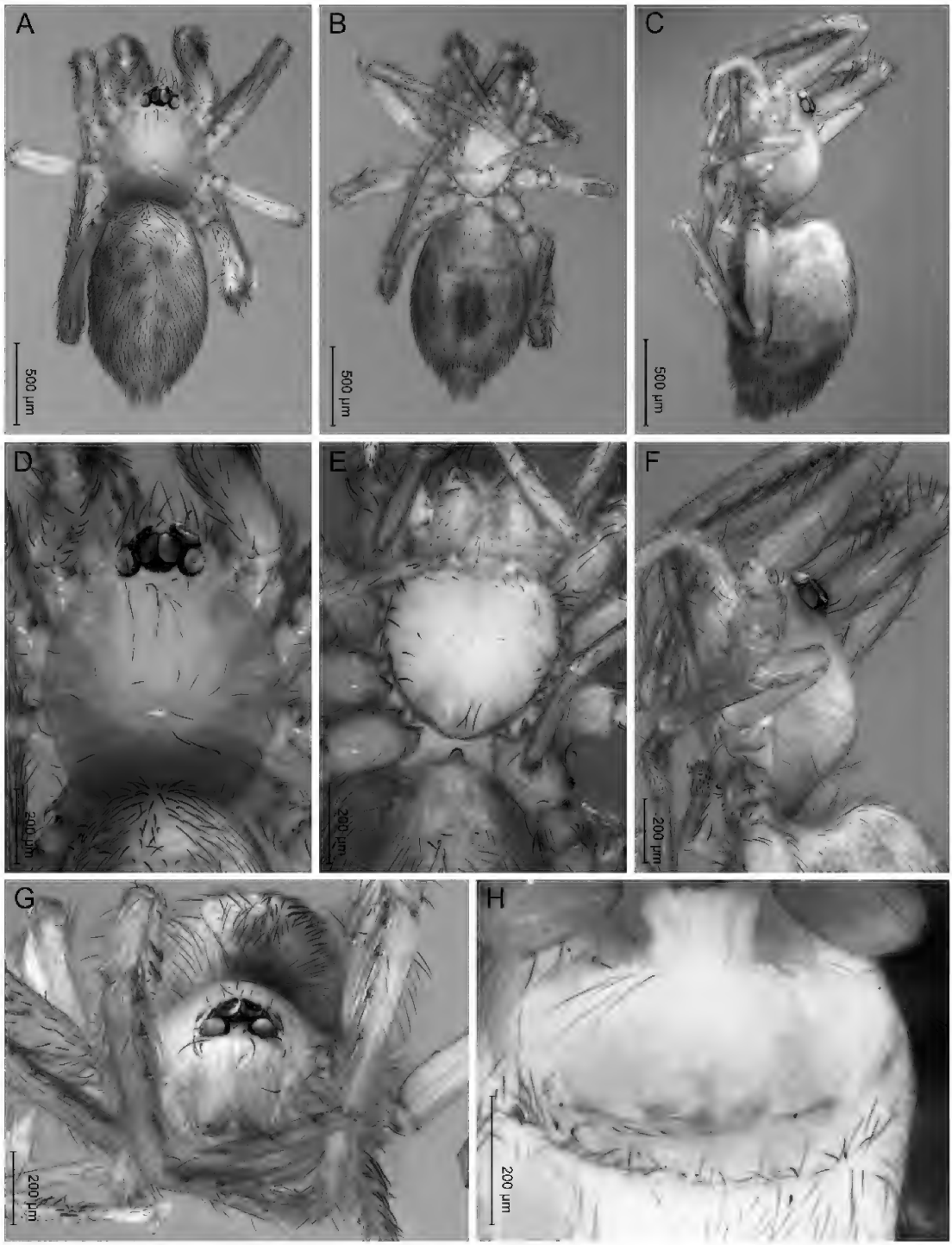


Fig. 48. *Neotrops lorenae*, new species, **A–G,** female PBI_OON 43215, **H,** female PBI_OON 14764. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

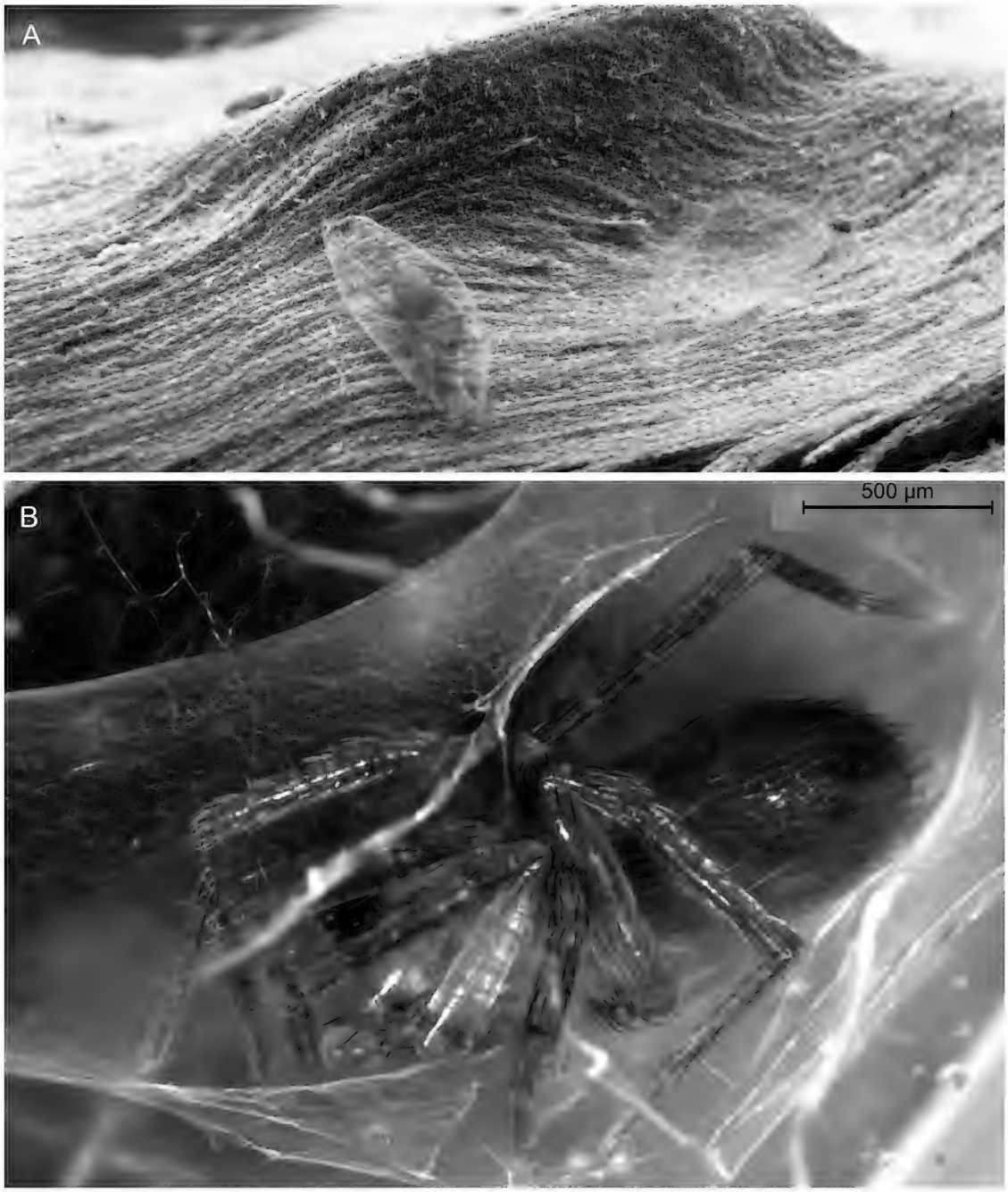


Fig. 49. *Neotrops lorenae*, new species, living specimens. **A.** Female, in her silken retreat, under *Eucalyptus* bark, in the type locality (Photo: Jorge Barneche). **B.** Male.

Ríos: Dept. Colón: P. Nac. El Palmar, Arroyo Los Loros, −31.861746° −58.20934°, 10 m, Aug. 07, 2011, Ramírez et al., MACN-Ar, 1♀ (MACN-Ar 28004 PBI_OON 42100), 1♀ (MACN-Ar 28165 PBI_OON 42121), 1♂ (MACN-Ar 28005 PBI_OON 42124). **URUGUAY: Paysandú**: 5 km from Paysandú city, 32.28861°, 58.03166°, Sept. 04, 2011, A.

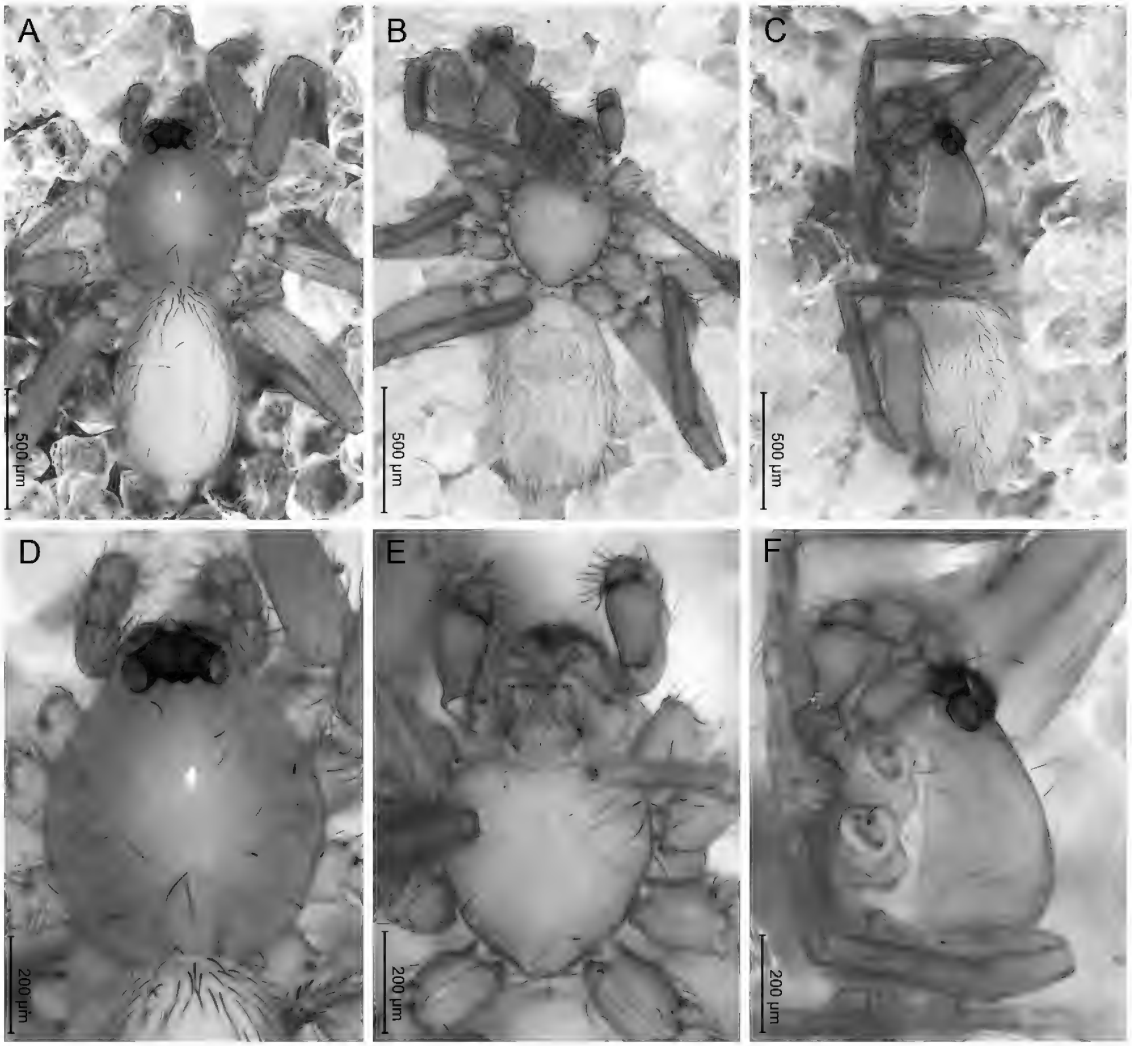


Fig. 50. *Neotrops avalosi*, new species, male PBI_OON 30668. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

Laborda, 2♂, 3♀, 1 juvenile (FCE 2310 PBI_OON 42195).

DISTRIBUTION: Known only from northeastern Buenos Aires and eastern Entre Ríos, Argentina, and Paysandú, Uruguay (map 3).

NATURAL HISTORY: This species was usually collected under bark of trees, both native and exotic species. The type series was found under *Eucalyptus* bark, where they build silken retreats (fig. 49). As in *N. darwini*, some specimens are hosts of parasitoid acrocerid larvae.

Neotrops avalosi, new species
Figures 50–52, 53E–F; map 2

TYPES: Male holotype and female paratype from Argentina: Corrientes Province: Laguna Brava (road to Santa Ana), −27.50000°, −58.70000°, Dec. 12, 2004, Ávalos G. and Rubio G. (MACN-Ar 26503, PBI_OON 30668 and MACN-Ar 26502, PBI_OON 30669, respectively); deposited In MACN-Ar. One male and one female paratypes with same data (PBI_OON 30670); deposited in CARTROUNNE.

Fig. 51. *Neotrops avalosi*, new species, male PBI_OON 30668. **A.** Habitus, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

ETYMOLOGY: The specific epithet is a patronym in honor of Gilberto Ávalos (Universidad Nacional del Nordeste, Corrientes), one of the collectors of the type series and many other oonopids in northeastern Argentina.

DIAGNOSIS: Males resemble those of *N. yabare* in having the conductor bent dorsally about 90°, but both the conductor and the embolus are proportionately larger (figs. 51B–D, 53F). Females are very similar to those of *N. rubioi* and *N. nigromaculatus* by somatic and genital morphology, but are recognized by the subdistal constriction of the anterior receptacle, which is shorter than the posterodorsal plate (fig. 53E).

DESCRIPTION: Male (holotype, PBI_OON 30668). Total length 1.51. **Cephalothorax:** Carapace orange, broadly oval in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to less than half their maximum width; lateral margin straight; nonmarginal pars cephalica setae dark, needlelike, scattered; nonmarginal pars thoracica setae dark, needlelike; marginal setae dark, needlelike. Clypeus setae dark,

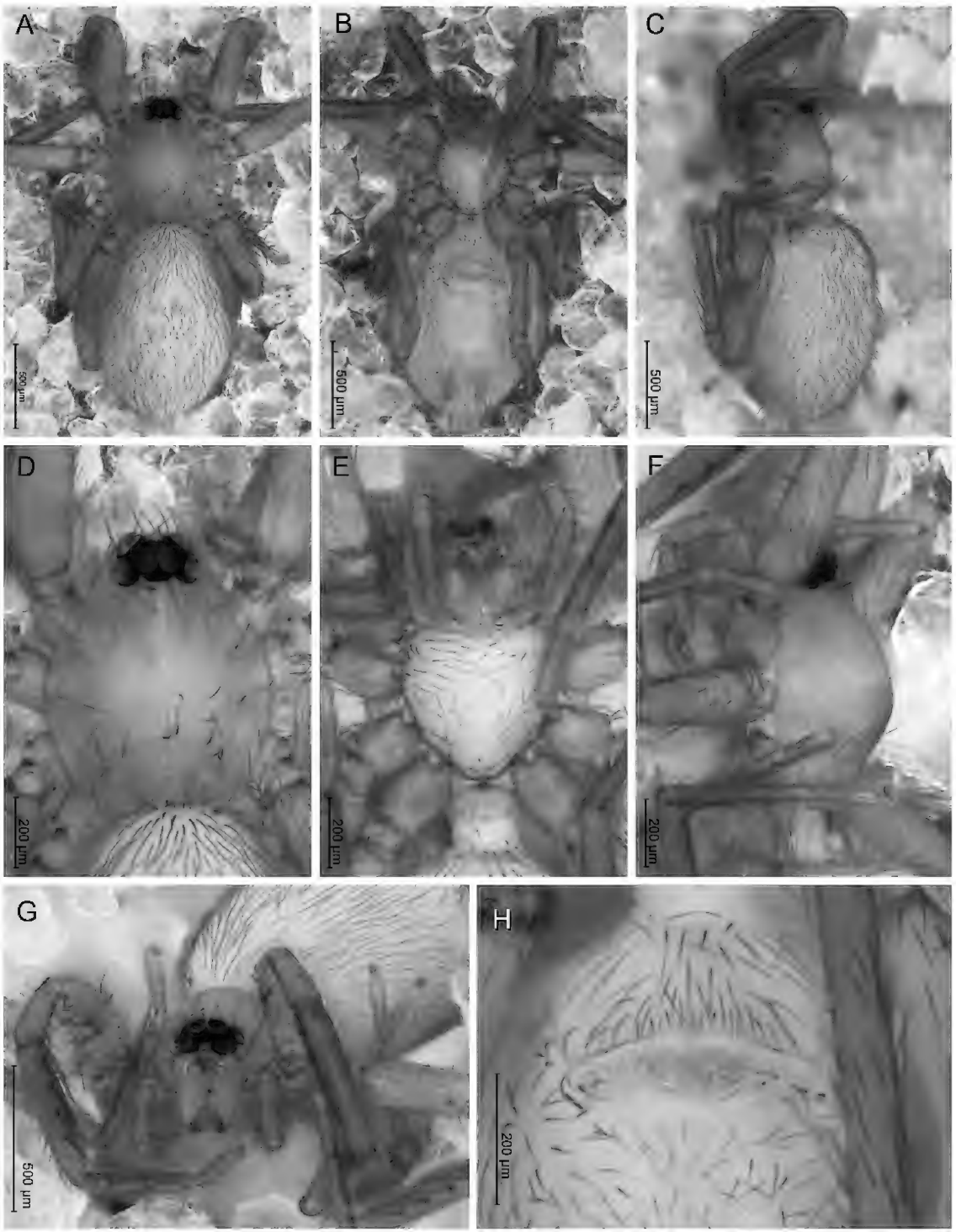


Fig. 52. *Neotrops avalosi*, new species, female PBI_OON 30669. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

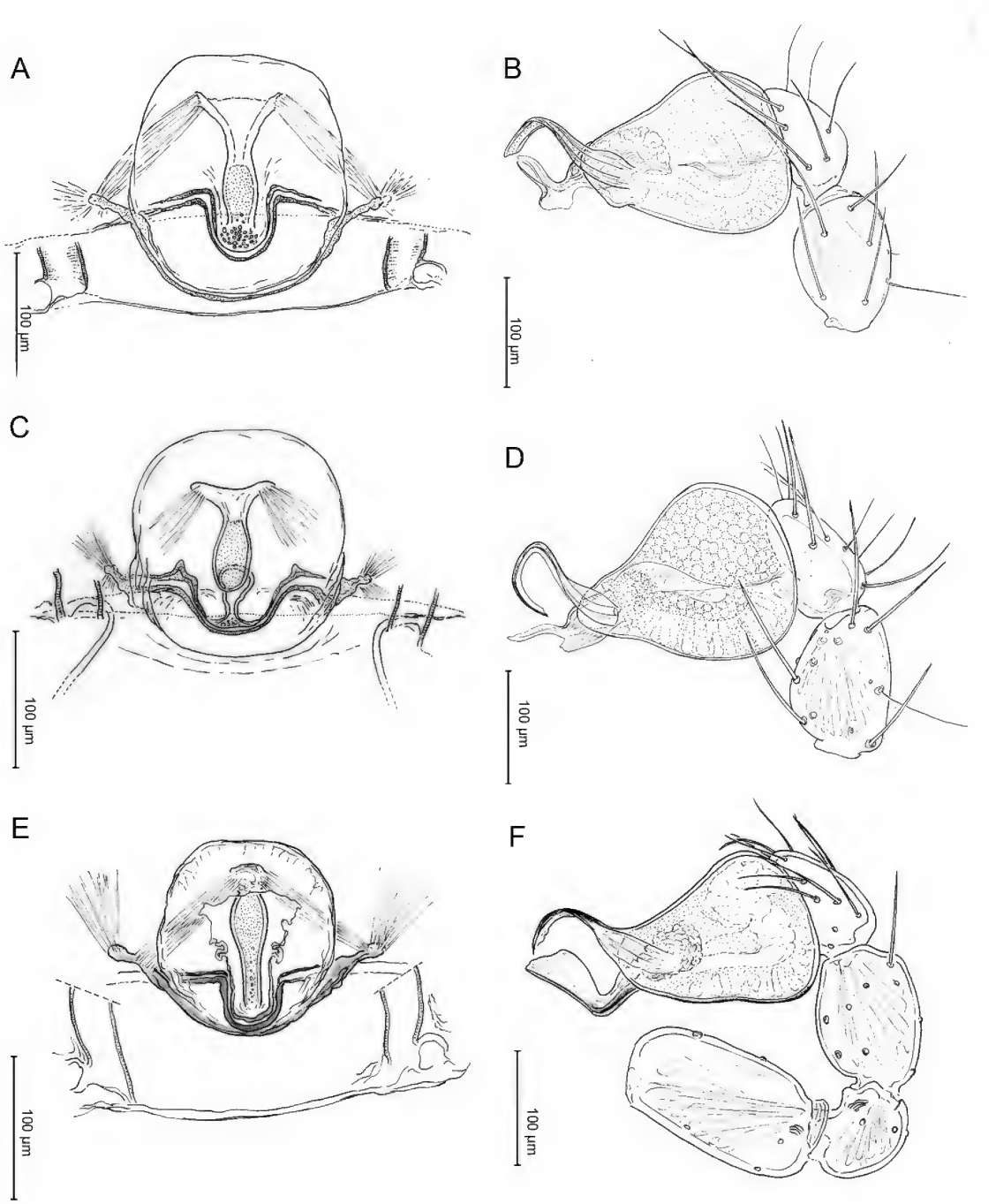


Fig. 53. *Neotrops* spp. genitalia, cleared. **A–B.** *Neotrops pombero*, new species. **C–D**, *N. lorenae,* new species. **E–F**, *N. avalosi,* new species. **A.** Internal female genitalia, dorsal view (PBI_OON 14768). **B.** Male palp, retrolateral view (PBI_OON 14769). **C.** Internal female genitalia, dorsal view (PBI_OON 14764). **D.** Male palp, retrolateral view (PBI_OON 14764). **E.** Internal female genitalia, dorsal view (PBI_OON 30670). **F.** Male palp, retrolateral view (PBI_OON 30668).

needlelike. Eyes ALE, PME subequal, larger than PLE, ALE circular, PME circular, PLE oval; posterior eye row procurved from front; ALE separated by their radius to diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum as long as wide (fig. 50E), pale orange, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV; setae sparse, evenly scattered. Mouthparts: chelicerae, endites, and labium pale orange; cheliceral setae light, evenly scattered. Labium anterior margin indented at middle. Endites distally not excavated, anteromedian tip with backward folded ridge, each longitudinal ridge ends anteriorly in a transverse row of three short setae (fig. 50E); endites less sclerotized anteriorly and ectally to the ridges. **Abdomen:** Dorsum white. Book lung covers elliptical. Postepigastric scutum pale orange. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:** Pale orange; femur IV not thickened, same size as femora I–III, tibia IV specialized hairs on ventral apex present. Leg spination: leg I: femora d1, pv0-0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora d1, pv0-0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d0-1-1, tibiae p1-1, v2ap, r1-1, metatarsi p1-1, r1, v2ap; leg IV: femora d1-1-1, tibiae v1-1-1, d0-1-1; metatarsi p1-1. Trichobothria not examined. **Genitalia:** Palp proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, not fused with bulb; bulb pale orange, 1 to 1.5 times as long as cymbium, stout, tapering apically, distal part translucent conductor with the distal half broadly expanded and dorsally bent about 90°; embolus dark.

FEMALE (paratype, PBI_OON 30669). Total length 1.94. As in male except as noted. **Cephalothorax:** Carapace pale orange. Palp spines absent. **Abdomen:** Postepigastric area setae dark, needlelike. **Legs:** Patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora d1, pv0-0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora d1, pv0-0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d0-1-1, tibiae d1, v1ap, r1, metatarsi d0-2, p0-1, v1-0-1ap; leg IV: femora d1-0-1, tibiae p1-1ap, d2-0-2, v0-0-1, r1-0, metatarsi d2-2, p1-1, v0-1-1ap, r1-1. **Genitalia:** Dorsal view (fig. 53E): anterior receptacle relatively thin and long, with a subdistal constriction. Distal part of the uterus externus with folded margins. Transverse ridges clearly notched. Posterior plate large, covering completely the anterior elements of the internal female genitalia.

OTHER MATERIAL EXAMINED: **ARGENTINA: Corrientes:** San Miguel, July 17, 2003, Ávalos, G., 1♂, 1♀ (CARTROUNNE PBI_OON 30675); same locality, Mar. 24, 1999, Ávalos, G., 1♂ (CARTROUNNE PBI_OON 30686). **PARAGUAY: Alto Paraná:** C.F.A.P., Jan. 01, 1980, C. Dlouhy, 1♀ (MHNG PBI_OON 42064).

DISTRIBUTION: Argentina (northern Corrientes), and Paraguay (Alto Paraná) (map 2).

NOTE: Grismado et al. (2010) illustrated several specimens of *Neotrops nigromaculatus*; one of them (their fig. 6, PBI_OON 17993), from Picada de los Ciervos, Uruguay, has an anterior receptacle similar to that of *N. avalosi* (i.e., a subterminal constriction delimiting a small apical bulb). The subsequent finding of several females in Corrientes with similar genital morphology suggests that *N. avalosi* could also be found in northern Uruguay, but we prefer to wait for the discovery of males of that region as stronger evidence for the sex matching.

Neotrops piacentinii, new species
Figures 54–55, 60D; map 5

TYPES: Male holotype from Argentina: Misiones: Depto. Oberá, Campo Ramón: Refugio de Selva y Centro de Investigaciones Antonia Ramos (CIAR), Sector Casa de Piedra −27.44605° −54.94118°, 125 m, May 31, 2011, to June 03, 2011, Rubio G., Izquierdo M., Piacentini L., and Adilardi R. (MACN-Ar 28229 PBI_OON 43362). One male paratype from the same locality, in suspended soil, 3 Nov. 2011, Rubio G. (MACN-Ar 30116 PBI_OON 42560). Deposited In MACN-Ar.

ETYMOLOGY: The specific epithet is a patronym in honor of Luis N. Piacentini (MACN), one of the collectors of the only

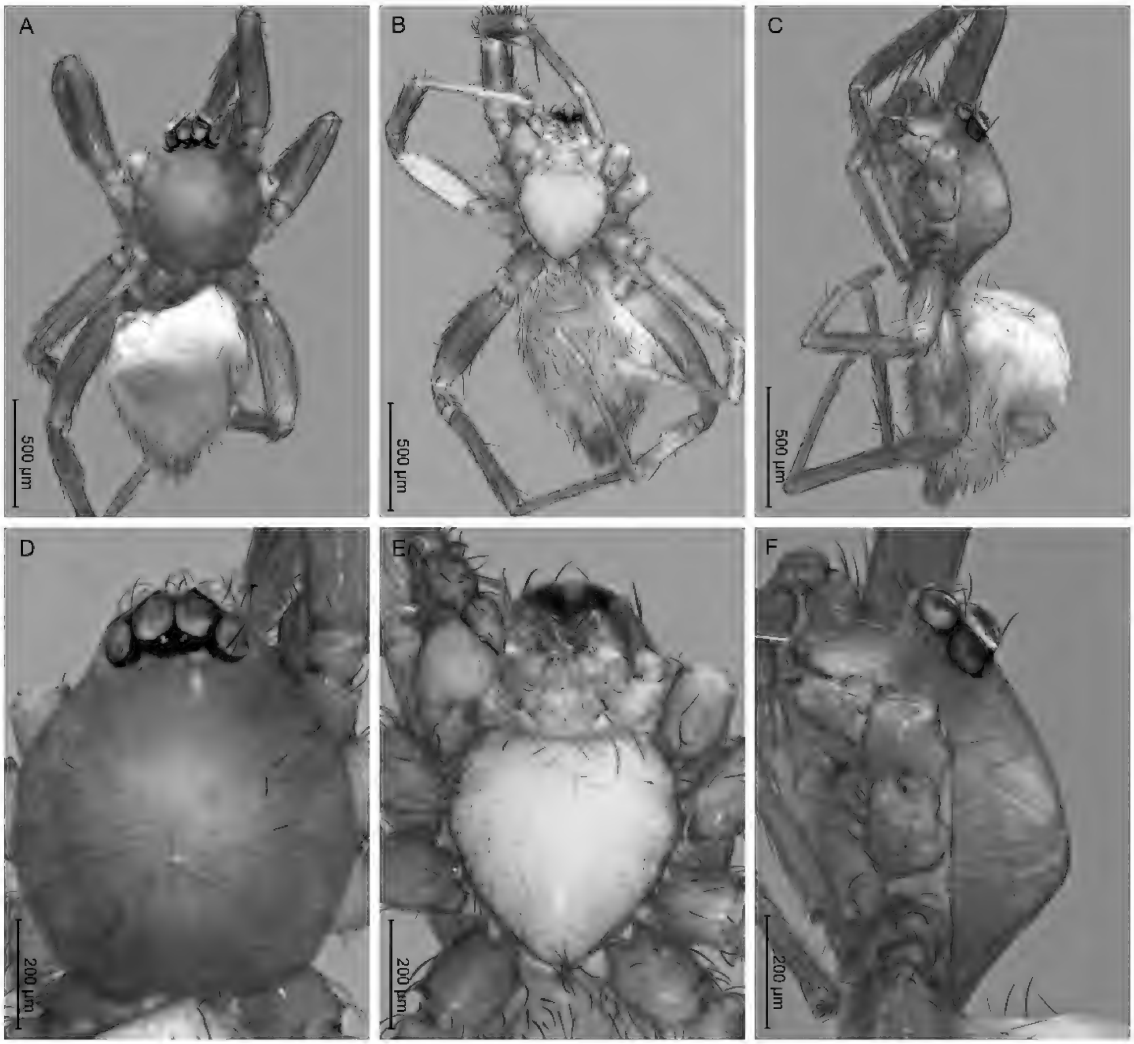


Fig. 54. *Neotrops piacentinii*, new species, male PBI_OON 43362. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

known specimens and also of many other oonopids in Argentina.

DIAGNOSIS: Males differ from the other known species of the *nigromaculatus* group by the conductor, which is L-shaped and not expanded (figs. 55B–D, 60D).

DESCRIPTION: MALE (holotype, PBI_OON 43362). Total length 1.60. **Cephalothorax:** Carapace orange, broadly oval in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to between 0.5 and 0.75 times its maximum width; lateral margin straight; nonmarginal pars cephalica setae absent; nonmarginal pars thoracica setae dark, needlelike; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes ALE, PME subequal, larger than PLE, ALE oval, PME circular, PLE oval; posterior eye row procurved from front; ALE separated by less than their radius, ALE-PLE touching, PME touching for less than half their length, PLE-PME separated by less than PME radius. Sternum longer than wide, yellow-brown, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV; setae abundant, densest laterally

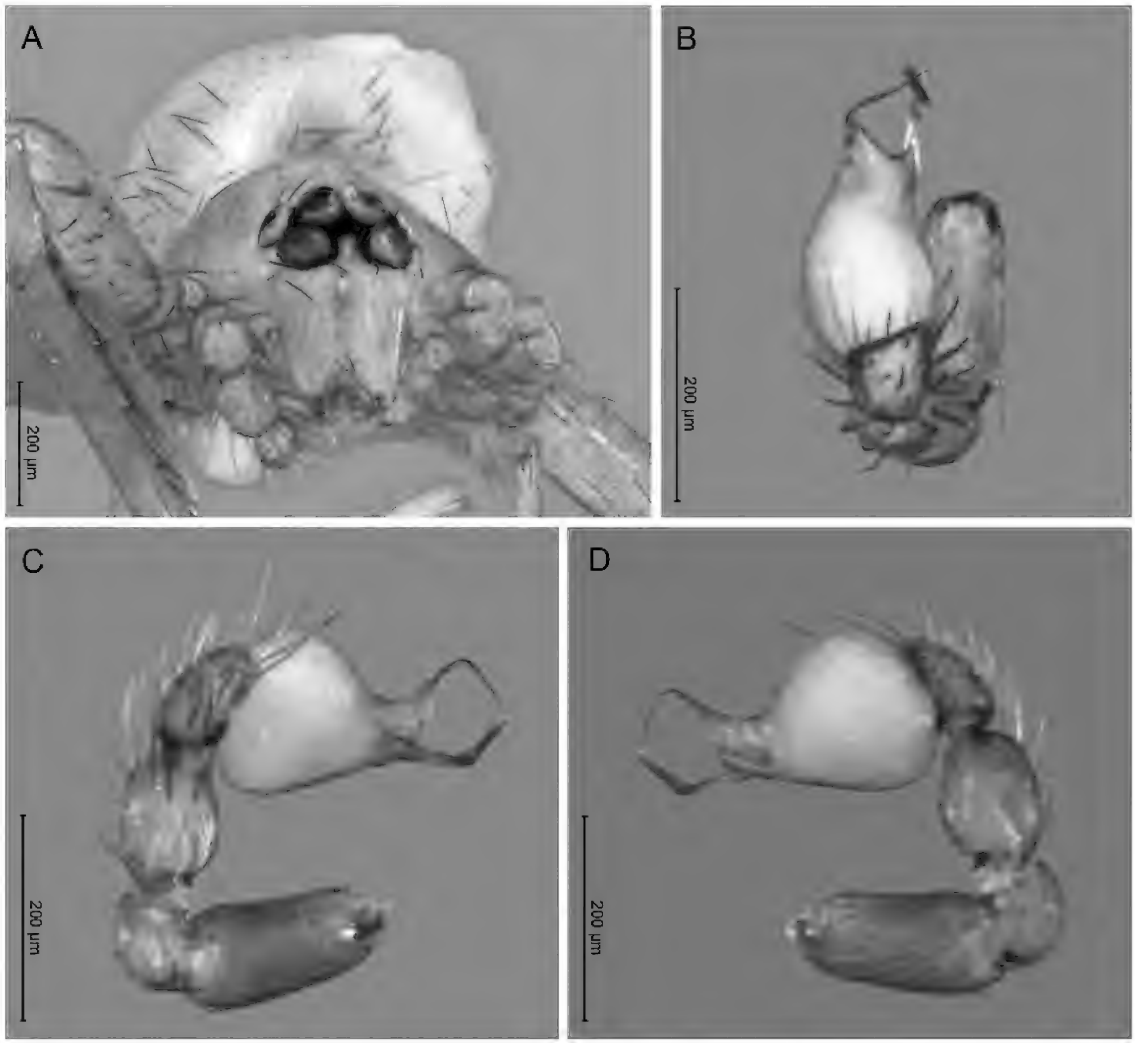
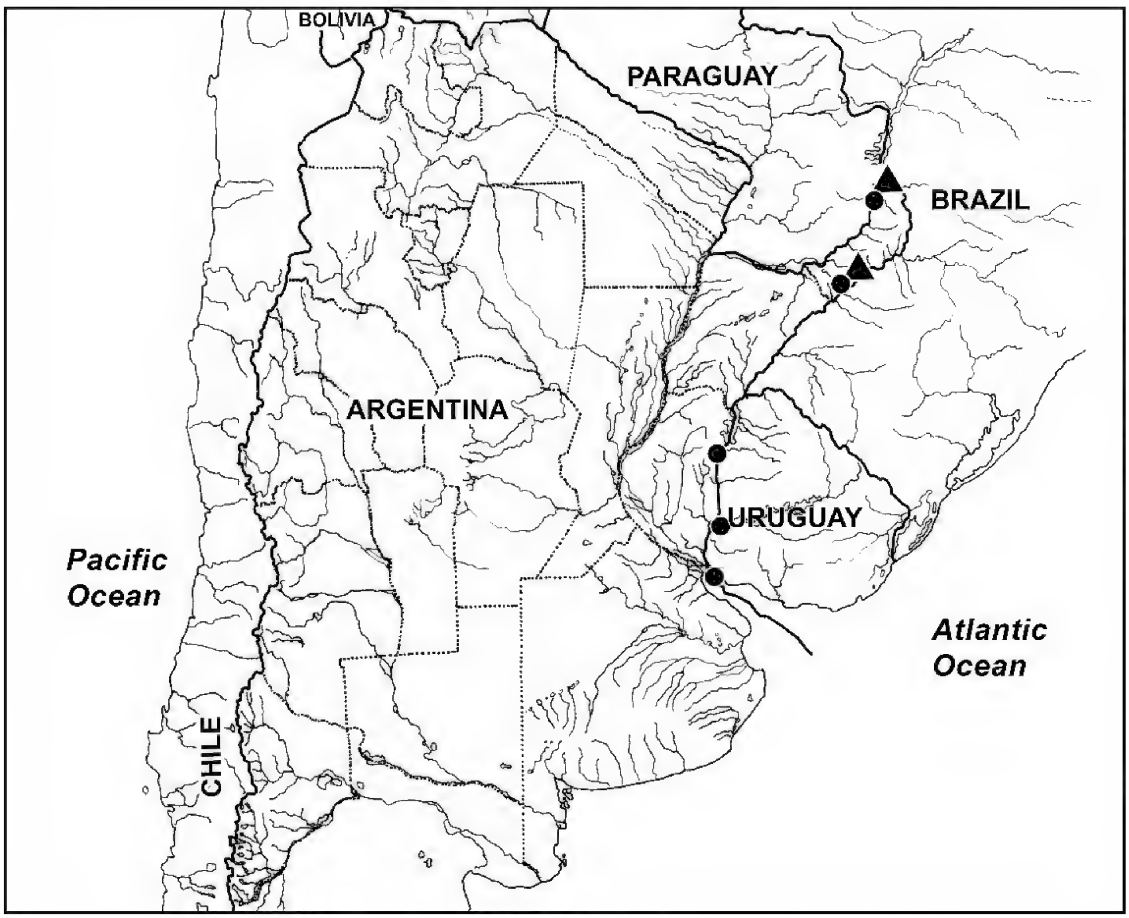


Fig. 55. *Neotrops piacentinii*, new species, male PBI_OON 43362. **A.** Habitus, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

(fig. 54E). Mouthparts: chelicerae, endites, and labium pale orange; cheliceral setae dark, evenly scattered. Labium anterior margin indented at middle; with six or more setae on anterior margin. Endites distally not excavated, anterolateral membranose lobes. **Abdomen** (crushed): Dorsum white. Book lung covers elliptical. Postepigastric scutum pale orange. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:** Orange. Leg spination: leg I: femora d1, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II missing; leg III: femora d1-1, tibiae d1, p1-1, r1-1, v1-1ap, metatarsi p1-1, r1-1, v2ap; leg IV: femora d1-1-1, tibiae d1-1, p1-1, r1-1, v1-1ap, metatarsi p1-1, r1-1, v1-2ap. Trichobothria not examined. **Genitalia:** Palp proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, not fused with bulb; bulb yellow, more than two times as long as cymbium, stout, tapering apically, basally globose, abruptly tapering toward the distal part, distal part of conductor L-shaped, not expanded; embolus dark (figs. 55B–D, 60D).

FEMALE: Unknown.



Map 4. Records of *Neotrops poguazu* (triangles) and *N. sciosciae* (circles).

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Known only from the type locality, in Misiones, northeastern Argentina (map 5).

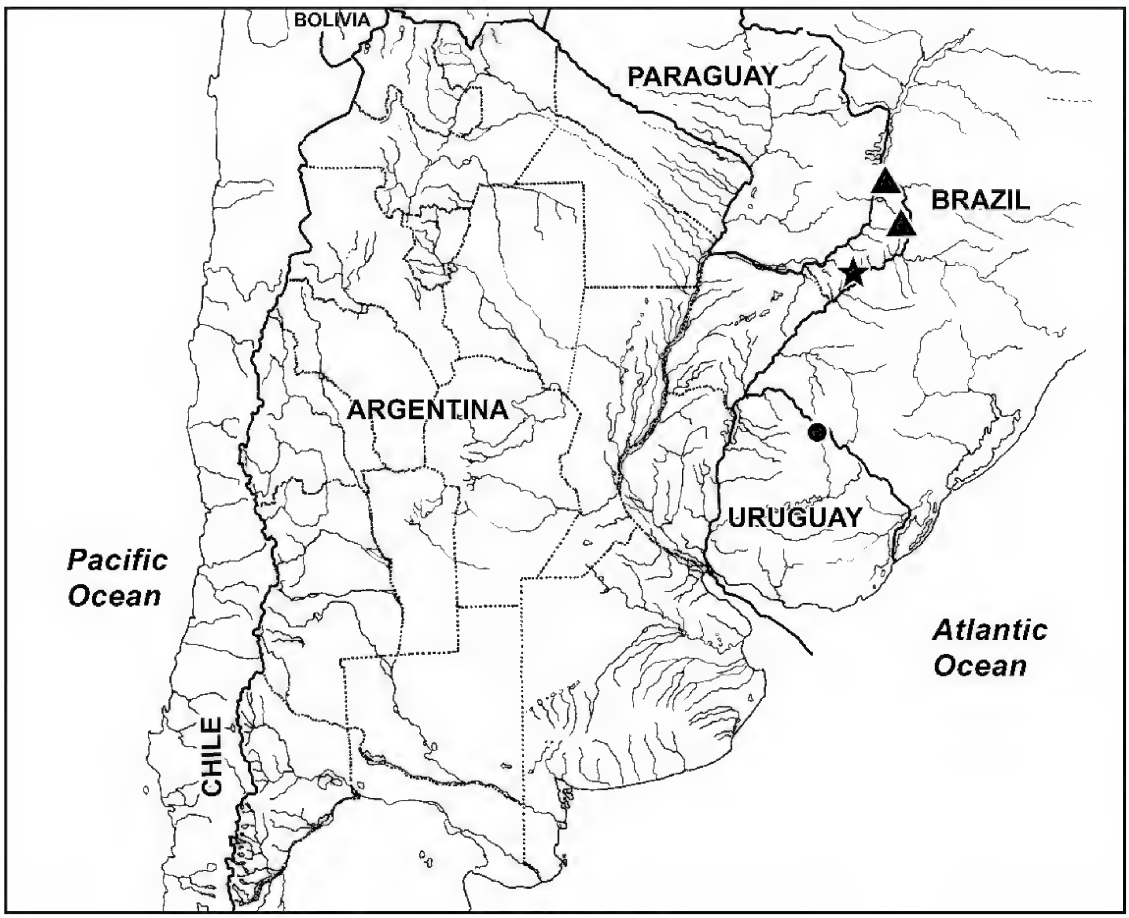
Neotrops yabare, new species
Figures 56–58, 60A–B; map 6

TYPES: Male holotype from Bolivia: Santa Cruz: Chiquitos: Yabaré (Estación de la Univ. A. Gabriel R. Moreno), N de Tres Cruces, Transitional Chaco-Chiquitano Forest, leaf litter, 260 m, −16.44166°, −62.17250°, Oct. 20, 2010, to Oct. 24, 2010, Grismado, C., Ávila S. and Pérez, M. (PBI_OON 43201); deposited in CBF. Female paratype, with same data (MACN-Ar 28435 PBI_OON 43126); deposted in MACN-Ar.

ETYMOLOGY: The specific epithet is a noun in apposition taken from the type locality.

DIAGNOSIS: Males resemble those of *N. avalosi* in having a strongly bent conductor, but have both the conductor and embolus proportionately smaller (figs. 57B–D, 60B). Females are recognized by the widened, rounded anterior part of the anterior receptacle, with two small lateral projections (fig. 60A).

DESCRIPTION: MALE (holotype, PBI_OON 43201). Total length 1.66. **Cephalothorax:** Carapace yellow-brown, broadly oval in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to less than half their maximum width; lateral margin straight; nonmarginal pars cephalica setae absent; nonmarginal pars thoracica setae absent; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes all



Map 5. Records of *Neotrops labarquei* (circle), *N. lopardoae* (triangles) and *N. piacentinii* (star).

subequal, all eyes circular; posterior eye row procurved from front; ALE separated by their radius to diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum as long as wide, yellow-brown, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV; setae sparse, densest laterally. Mouthparts: chelicerae, endites, and labium yellow-brown; cheliceral setae dark, evenly scattered. Labium anterior margin indented at middle; with six or more setae on anterior margin. Endites distally not excavated, anteromedian tip unmodified, with lateral ridges slightly more sclerotized (fig. 56E). **Abdomen:** Dorsum pale white. Book lung covers ovoid. Postepigastric scutum yellow-brown. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:** Yellow-brown; femur IV not thickened, same size as femora I–III. Leg spination: leg I: femora pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d1-1, tibiae r1, p1-1, v1ap, metatarsi p1-1; leg IV: femora d1-1-1, tibiae p1-0-1, r1-0-1, v1, metatarsi d1ap, p1-0-1, r1-0-1, v1ap. Trichobothria not examined. **Genitalia:** Palp proximal segments yellow-brown; femur normal size, two or more times as long as trochanter; cymbium yellow-brown, narrow in dorsal view, not fused with bulb; bulb yellow, 1 to 1.5 times as long as cymbium, stout, tapering apically; conductor with distal part translucent, broadly expanded and bent dorsally about 90°; embolus dark (figs. 57B–D, 60B).

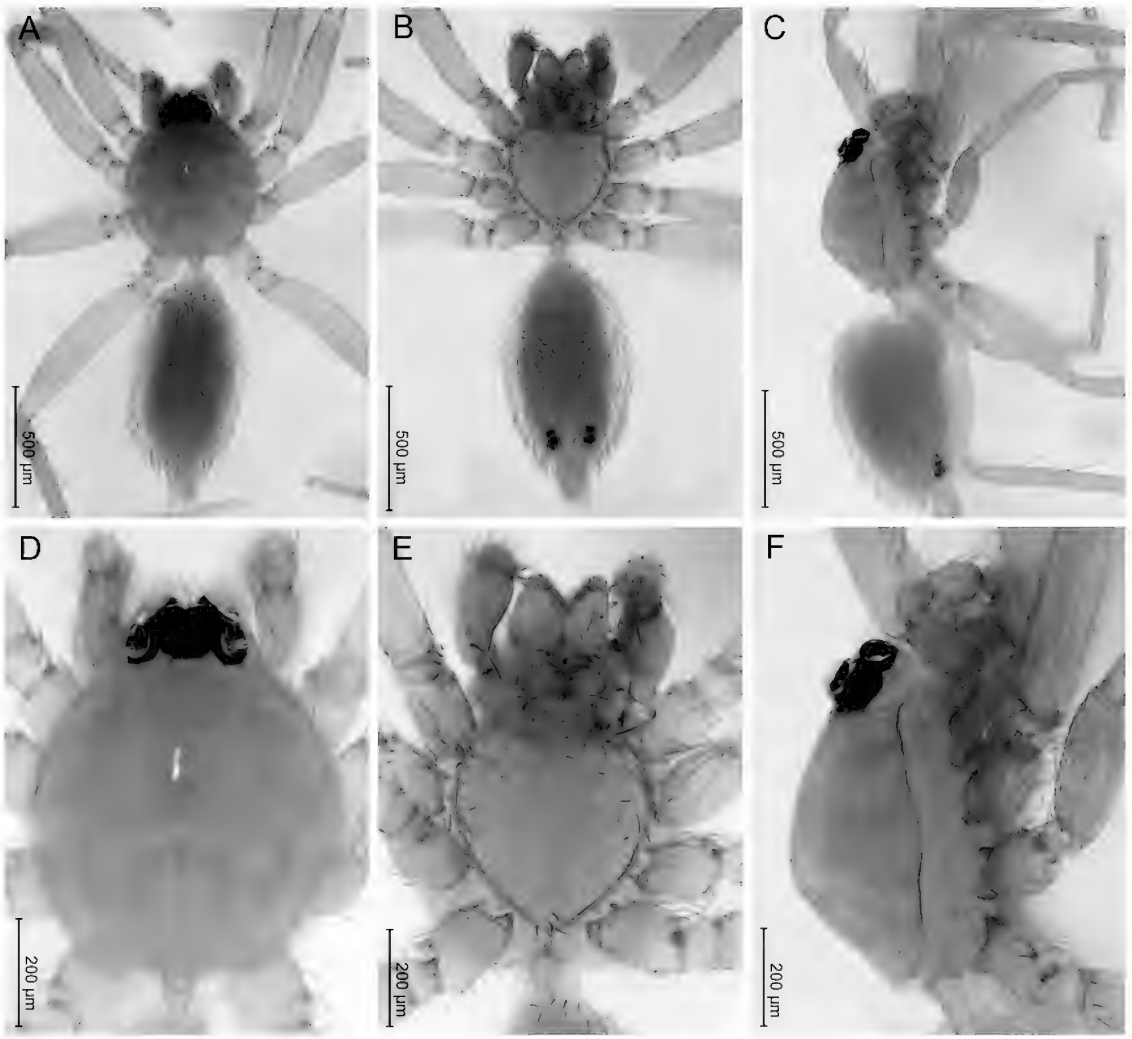


Fig. 56. *Neotrops yabare*, new species, male PBI_OON 43201. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

FEMALE (paratype, PBI_OON 43216, apparently not completely sclerotized after final molt). Total length 1.51. As in male except as noted. **Cephalothorax:** Carapace yellowish white, anteriorly narrowed to between 0.5 and 0.75 times its maximum width; nonmarginal pars cephalica setae dark, needlelike, scattered; nonmarginal pars thoracica setae dark, needlelike. Eyes PLE oval. Sternum yellowish white, precoxal triangles present; setae abundant, dark, evenly scattered (fig. 58E). Mouthparts: chelicerae, endites, and labium yellowish white. Labium elongated hexagon. Palp spines absent. **Abdomen:** Postepigastric scutum whitish. Postepigastric area setae dark, needlelike (fig. 58H). **Legs:** White; patella plus tibia I nearly as long as carapace, tibia IV specialized hairs on ventral apex present. Leg spination: leg I: femora d1-0, pv0-0-1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora d1-0, pv0-0-1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d1-1, tibiae d1, p1-1, r0-0-1, v2ap, metatarsi d1-1, p1-1, v1-2ap; leg IV: femora d1-1, tibiae d1, p1-1, r1-0-1, v1-2ap, metatarsi d1-1, p1-1, r1, v1-0-2ap. **Genitalia:** Dorsal view: anterior receptacle with a very narrow base and rounded tip that bears two small lateral, flattened projections (fig. 60A).

OTHER MATERIAL EXAMINED: None.

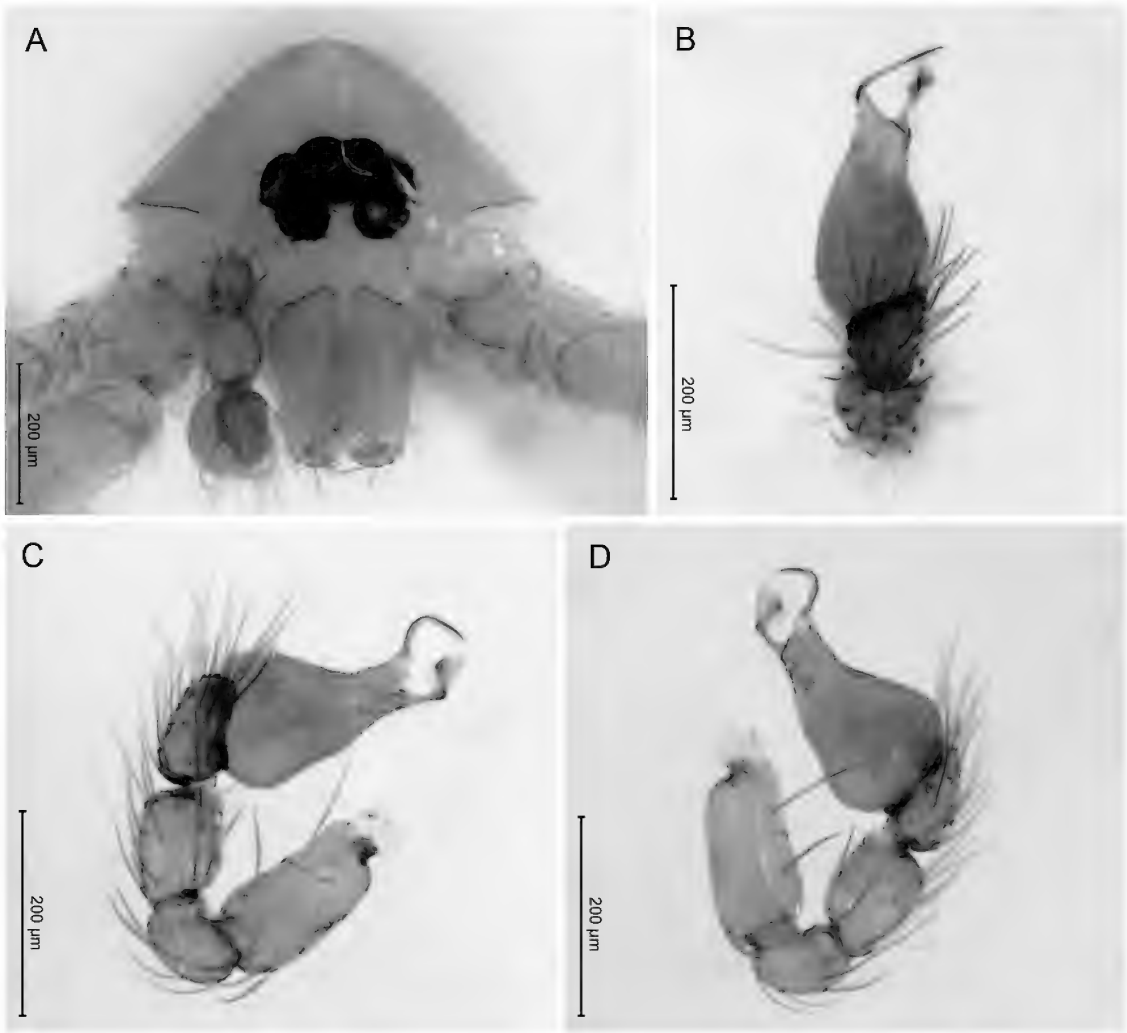


Fig. 57. *Neotrops yabare*, new species, male PBI_OON 43201. **A.** Carapace, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

DISTRIBUTION: Known only from the type locality, in Santa Cruz, southeastern Bolivia (map 6).

NATURAL HISTORY: The specimens were collected sifting litter and with pitfall traps in a xerophilous forest.

Neotrops izquierdoi, new species
Figures 59, 60C; map 6

TYPES: Female holotype and female paratype from Bolivia: La Paz: Provincia de Sud Yungas, Municipio de Chulumani, comunidad de Paraíso, −16.39488, −67.55847, 2255 m, Oct. 13, 2011, to Oct. 18, 2011, Matías Izquierdo (PBI_OON 42028, PBI_OON 42026); deposited in CBF; same data, one additional female paratype (MACN-Ar 28199 PBI_OON 42027); deposited in MACN-Ar.

ETYMOLOGY: The specific epithet is a patronymic in honor of Matías A. Izquierdo (MACN), participant of the PBI project, and collector of all known specimens, as well as many other South American oonopids.

DIAGNOSIS: Females differ from the other known species of the *nigromaculatus* group by the T-shaped anterior receptacle, with the stalk widening gradually toward the distal part (fig. 60C).

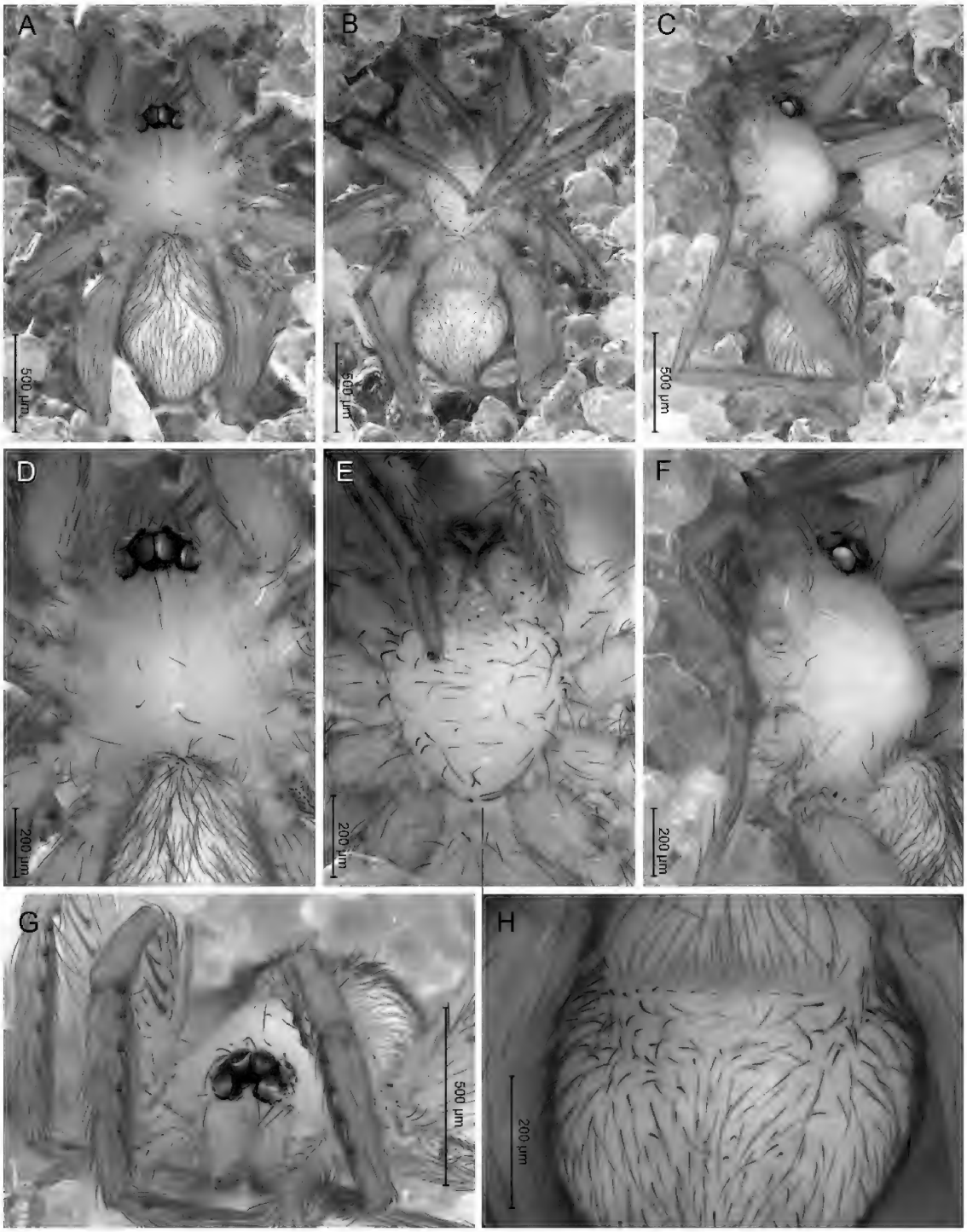


Fig. 58. *Neotrops yabare*, new species, female PBI_OON 43216. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

Map 6. Records of *Neotrops izquierdoi* (circle), *N. kopuchianae* (triangle) and *N. yabare* (star).

NOTE: Although the males of this species remain unknown, it is provisionally assigned to the *nigromaculatus* group because of the proportions of the tarsus-metatarsus of the forelegs (fig. 59B, C), the well-sclerotized carapace, and by the similar female genitalia.

DESCRIPTION: FEMALE (holotype, PBI_OON 42028). Total length 1.92. **Cephalothorax:** Carapace orange, broadly oval in dorsal view (fig. 59D), pars cephalica strongly elevated in lateral view, anteriorly narrowed to less than half their maximum width; lateral margin straight; nonmarginal pars cephalica setae absent; nonmarginal pars thoracica setae absent; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes ALE, PME subequal, larger than PLE, all eyes circular; posterior eye row procurved from front; ALE separated by more than their diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum as long as wide, pale orange, anterior margin unmodified, precoxal triangles present; setae sparse, dark, evenly scattered (fig. 59E). Mouthparts: chelicerae, endites, and labium pale orange; cheliceral setae light. Labium elongated hexagon, anterior margin indented at middle; with six or more setae on anterior margin. Palp spines absent. **Abdomen:** Dorsum pale white. Book lung covers ovoid. Postepigastric scutum pale orange. Spinneret scutum absent. Dorsum setae dark, needlelike. Postepigastric area setae dark, needlelike. Colulus represented only by setae. **Legs:** Pale orange; femur IV not thickened, same size as femora I–III, patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora pv 0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora d1-0, pv 0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d1-1, tibiae p1-1, metatarsi p1-1, r1, v1-1ap; leg IV: femora d1-0-1, tibiae p1-0-1, r1-1, metatarsi p1-0-1, r1, v2ap. Trichobothria not examined. **Genitalia:** Dorsal view: anterior receptacle T-shaped, similar to an inverted triangle, with stalk widening gradually toward the distal part, and reaching the edge of the posterodorsal plate (fig. 60C).

MALE: Unknown.

OTHER MATERIAL EXAMINED: None.

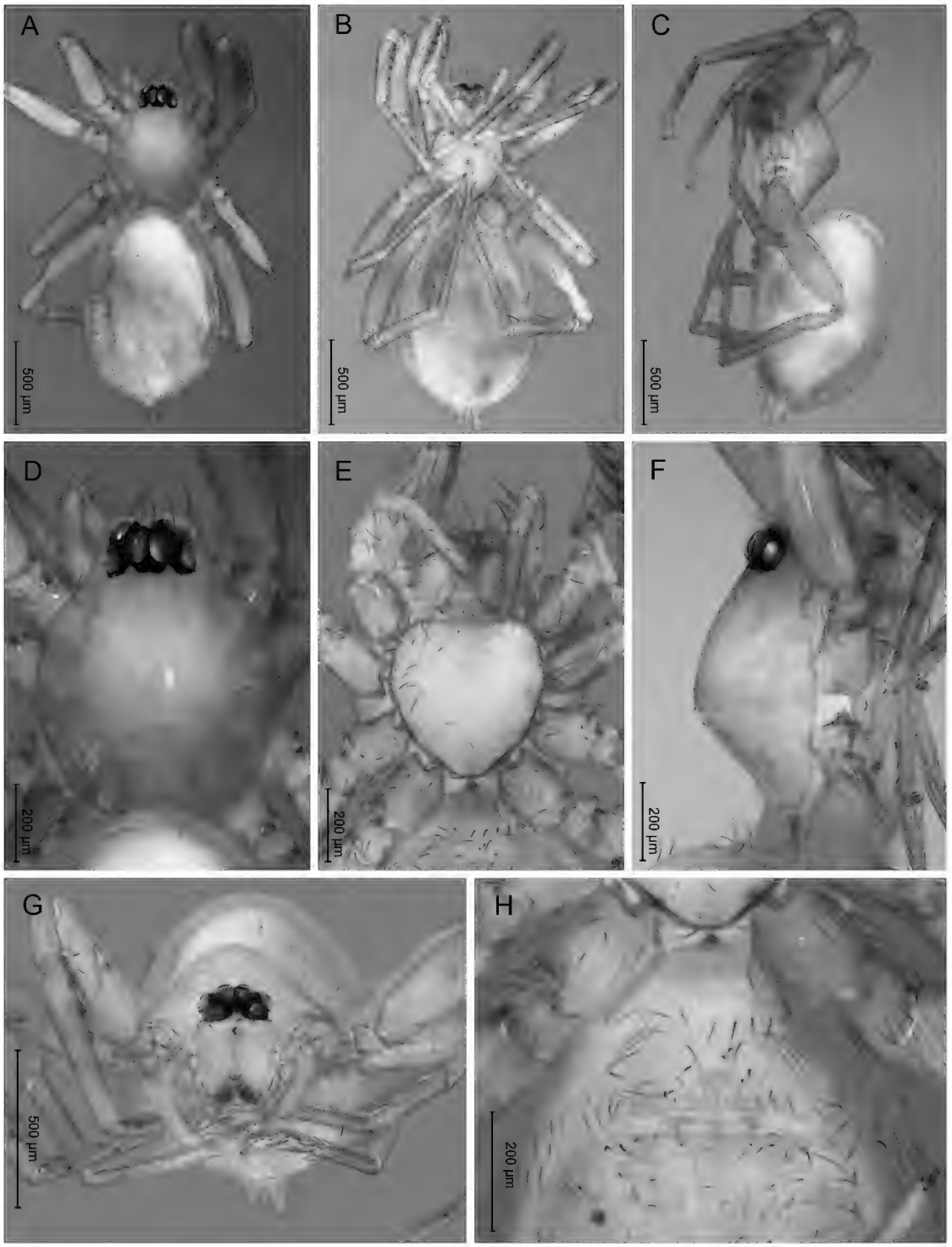


Fig. 59. *Neotrops izquierdoi*, new species, female PBI_OON 42027. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

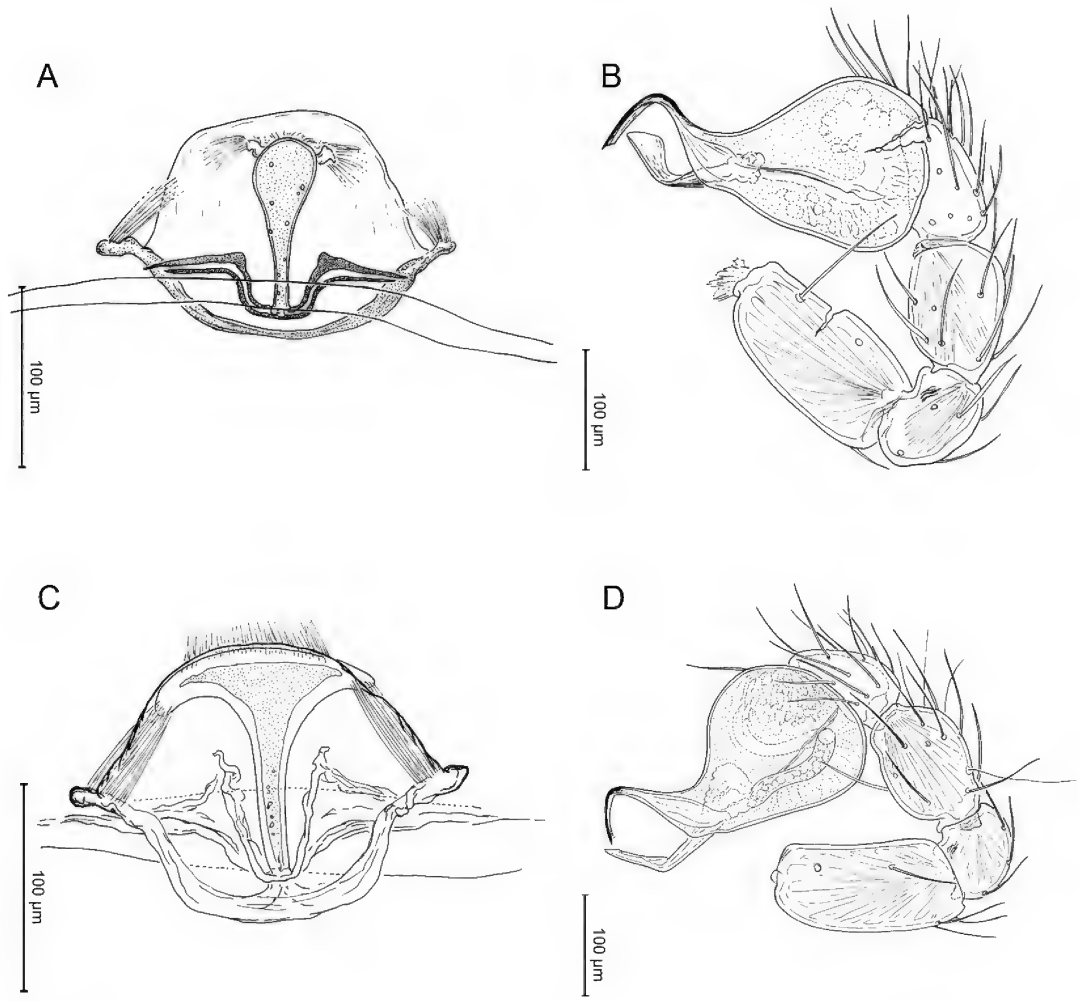


Fig. 60. *Neotrops* spp. genitalia, cleared. **A–B.** *Neotrops yabare*, new species. **C**, *N. izquierdoi,* new species. **D**, *N. piacentinii,* new species. **A.** Internal female genitalia, ventral view (PBI_OON 43216). **B.** Male palp, retrolateral view (PBI_OON 43201). **C.** Internal female genitalia, dorsal view (PBI_OON 42026). **D.** Male palp, retrolateral view (PBI_OON 43362).

DISTRIBUTION: Known only from the type locality, in the yungas forest of the Department of La Paz, Bolivia (map 6).

The *poguazu* Group

DIAGNOSIS: Copulatory bulb elongated, with a relatively small, lightly sclerotized conductor and an additional distal apophysis (figs. 69B, D, 76B, D). The four species assigned to this group (*poguazu, lopardoae, sciosciae,* and *labarquei*) have the largest body size in the genus, and show relatively enlarged femora IV, similarly as in the genus *Orchestina*.

This group comprises four species distributed in northeastern and eastern Argentina and northern Uruguay, along several undescribed species from southern and eastern Brazil.

Neotrops poguazu, new species
Figures 61–63, 69A–B; map 4

TYPES: Male holotype from Argentina: Misiones: Depto. Oberá, Campo Ramón: Refugio de Selva y Centro de Investigaciones Antonia Ramos (CIAR), Sendero del bosque cercano a la casa, −27.44445° −54.94064°,

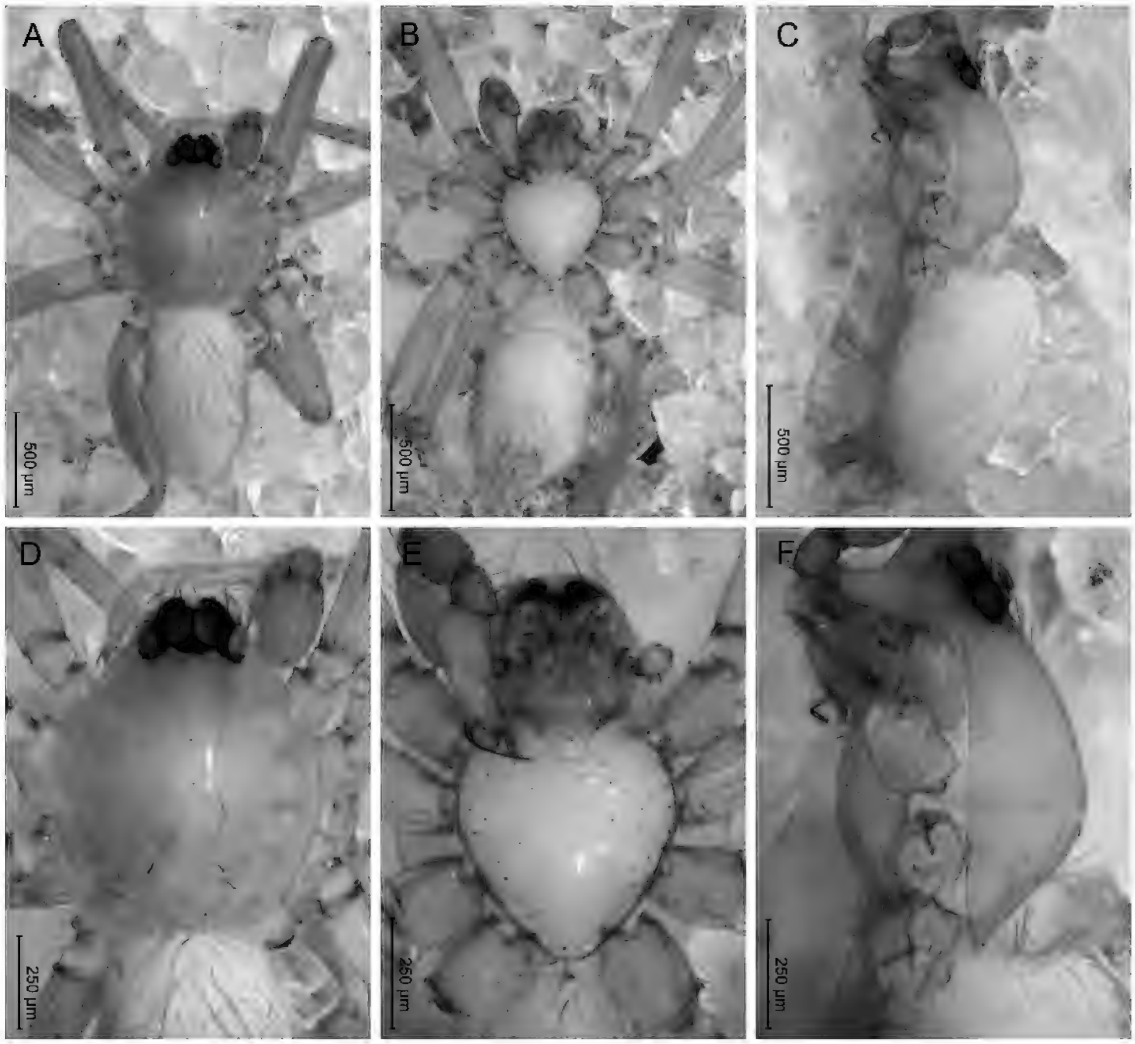


Fig. 61. *Neotrops poguazu*, new species, male PBI_OON 14767. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

100 m, May 31, 2011, to June 03, 2011, Rubio G., Izquierdo M., Piacentini L., and Adilardi, R. (MACN-Ar 28240 PBI_OON 42068), one female paratype (together with one immature) with same data as the holotype (MACN-Ar 28234 PBI_OON 42040), and one male paratype from Misiones: Parque Nacional Iguazú: Área de la Garganta del Diablo, leaf litter, −25.70000°, −54.45000°, Jan. 19, 2005, to Jan. 20, 2005, C. Grismado, L. Lopardo, L. Piacentini, A. Quaglino, G. Rubio (MACN-Ar 17990 PBI_OON 14910), all deposited in MACN-Ar.

ETYMOLOGY: The specific name is a Guaraní adjective for "big hand," an allusion to the enlarged palpal femur of the males of this species.

DIAGNOSIS: Males of *N. poguazu* differ from all others in the group by having the additional palpal sclerite bifid, with two acute projections, and the conductor relatively large, razor shaped (figs. 62B–D, 69B). Females differ by the unexpanded tip of the anterior receptacle, slightly turned to dorsal (fig. 69A), and the medially straight margin of the epigastrium, abruptly bent at the sides about 45° (fig. 63H).

Fig. 62. *Neotrops poguazu*, new species, male. **A.** Carapace, anterior view (PBI_OON 14767). **B–D.** Palp (PBI_OON 14910). **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

DESCRIPTION: MALE (holotype, PBI_OON 42068). Total length 2.04. **Cephalothorax:** Carapace yellow, broadly oval in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to less than half their maximum width; lateral margin straight; nonmarginal pars cephalica setae dark, needlelike, in U-shaped row, with one row between the U-shaped line of setae; nonmarginal pars thoracica setae dark, needlelike; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes on a dark pigmented area, all subequal, ALE circular, PME oval, PLE oval; posterior eye row procurved from front; ALE separated by their radius to diameter, ALE–PLE separated by less than ALE radius, PME touching throughout most of their length, PLE–PME separated by less than PME radius. Sternum as long as wide, yellow, posterior margin not extending posteriorly of coxae IV, with an anteromedian indentation where the posteriorly elongated labium fits (fig. 61E); setae sparse, evenly scattered. Mouthparts: chelicerae, endites, and labium yellow; cheliceral setae dark, evenly scattered. Labium anterior margin indented at middle, posteriorly elongated, fitting in the sternal anterior indenta-

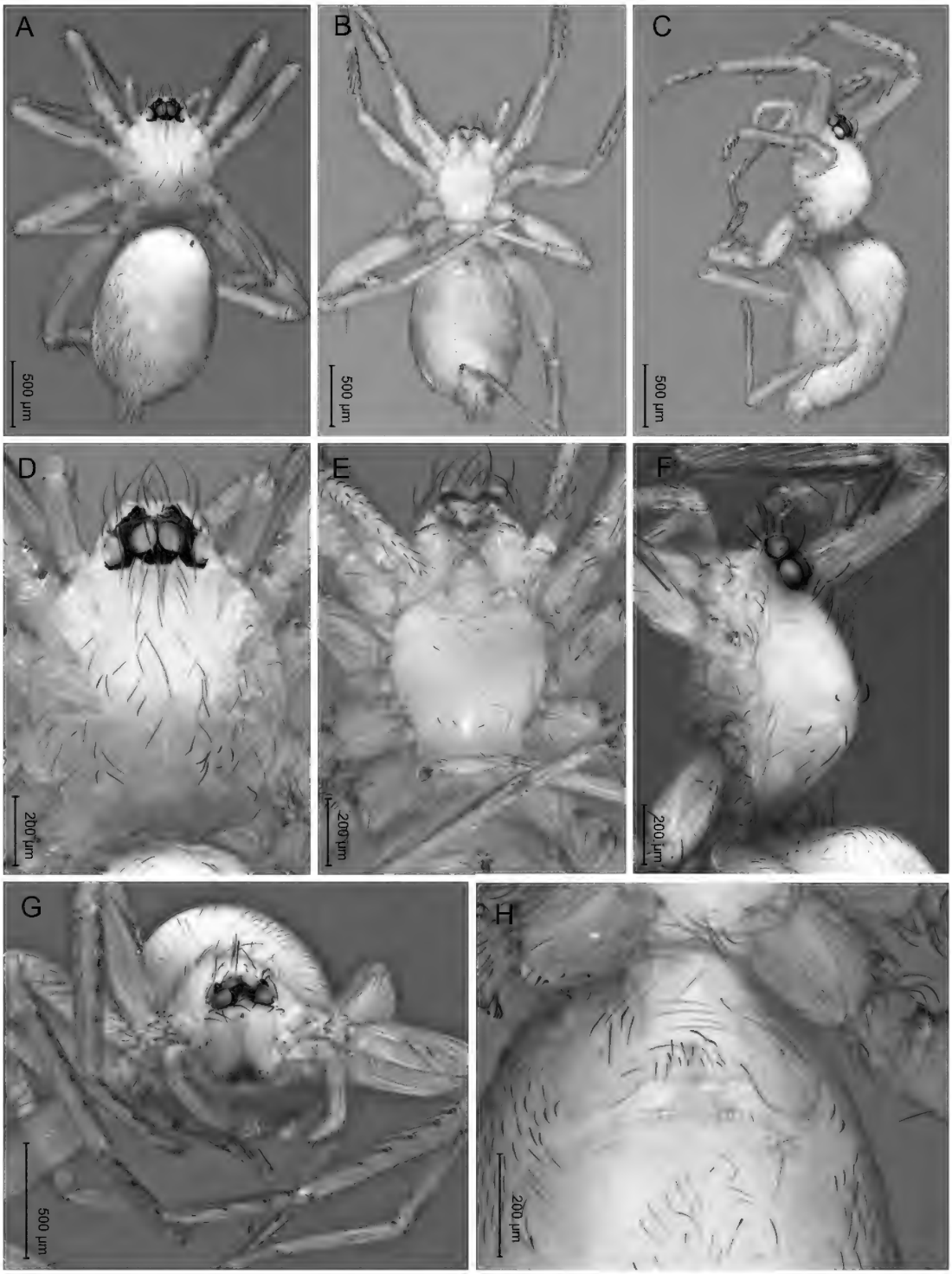


Fig. 63. *Neotrops poguazu*, new species, female PBI_OON 42040. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

tion, with six or more setae on anterior margin. Endites not excavated distally, with lateral translucent, broad flaps, with a sclerotized base. **Abdomen:** Dorsum pale white. Book lung covers elliptical. Postepigastric scutum yellow. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:** Yellow; femora IV thickened, tarsi very short, around one third of metatarsi length. Leg spination: leg I: femora d1-0, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora d1-0, pv0-0-0-0-1 (very tiny), tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d1-1, tibiae d1, p0-1, r0-1, v2ap, metatarsi d1subap, p1-1, r1-1, v2ap; leg IV: femora d1-1-1, tibiae d1, p1-1, r1-1, v1-2ap, metatarsi d1subap, p1-1, r1-0-1, v1-2ap. Tarsi I to IV superior claw teeth not examined in detail. Trichobothria not examined. **Genitalia:** Palp proximal segments pale orange; femur enlarged, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, not fused with bulb; bulb pale orange, more than two times as long as cymbium, slender, elongated, distal part of conductor razor shaped, flattened, with additional distal projection flattened, more sclerotized and bifid; embolus dark, gently curved, with a hooked tip and a small translucent distal membrane (figs. 62B–D, 69B).

Female (paratype, PBI_OON 42040). Total length 2.34. As in male except as noted. **Cephalothorax:** Carapace nonmarginal pars cephalica setae with one row between the U-shaped line of setae. Eyes on a darkened pigmented area. Sternum longer than wide, precoxal triangles present, the anterior indentation where the labium fits is not so pronounced as in the male (fig. 63E); setae abundant, dark. Labium an elongated hexagon, not extending as far back as in the male. Palp spines absent. **Abdomen:** Postepigastric area setae dark, needlelike. **Legs:** Patella plus tibia I nearly as long as carapace, femora IV thickened, tarsi short. Leg spination: leg I: femora d1/0-0, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora d1-0, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d1-1, tibiae d1, p1-1, v1-2ap, metatarsi d1, p1-1, r1-1, v1-2ap; leg IV: femora d1-1-1, tibiae d1, p1-1, r1-1, v1-2ap, metatarsi d1, p1-1, r1-1, v1-2ap. **Genitalia:** Ventral view: posterior margin of epigastric scutum straight, abruptly bent laterally to both sides about 45° (fig. 63H). Dorsal view: anterior receptacle elongated, gradually narrowed, tip not widened, slightly dorsally curved, from which arise at least two set of muscles, one anterodorsally and other to the lateral projections of the transverse ridge. Dorsal plate covering all the structures (fig. 69A).

Other Material Examined: Same data as the holotype, 2♀ (MACN-Ar 28242 PBI_OON 42089); 1 juvenile (MACN-Ar 28234 PBI_OON 42040); 1♀ (MACN-Ar 28239 PBI_OON 42069); Parque Nacional Iguazú: Area de saltos e islas, Feb. 08, 1995, to Feb. 15, 1995, M. Ramírez, 2♂ (MACN-AR 15352 PBI_OON 14767).

Distribution: Known only from Misiones Province (map 4).

*Neotrops scioscia*e, new species
Figures 64–68, 69C–G; map 4

Types: Male holotype and female paratype from Argentina: Buenos Aires Province: Isla Martín García, marginal forest, June 06, 2004, to June 08, 2004, C. Scioscia et al. col. (MACN-Ar 26073 PBI_OON 15079 and MACN-Ar 26076 PBI_OON 15081 respectively). Deposited in MACN-Ar.

Etymology: The specific epithet is a patronym in honor of Cristina L. Scioscia (MACN), collector of the type series.

Diagnosis: Both sexes resemble *N. poguazu* in having an anteriorly incised sternum (figs. 64E, 66E), but the males are recognized by the copulatory bulb with an S-shaped and anteroventrally directed additional element, and a thin conductor (fig. 65B–D, 69D), and females by the small lateral curved sclerites (apodemes?) below the epigastric furrow (figs. 66H, 68B, D, 69C, E–G).

Description: Male (holotype, PBI_OON 15079). Total length 2.34. **Cephalothorax:** Carapace yellow, ovoid in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to less than half their maximum width; lateral margin straight; nonmarginal pars cephalica setae in U-shaped row; nonmarginal pars thoracica setae present; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes all subequal, all eyes circular; posterior eye row

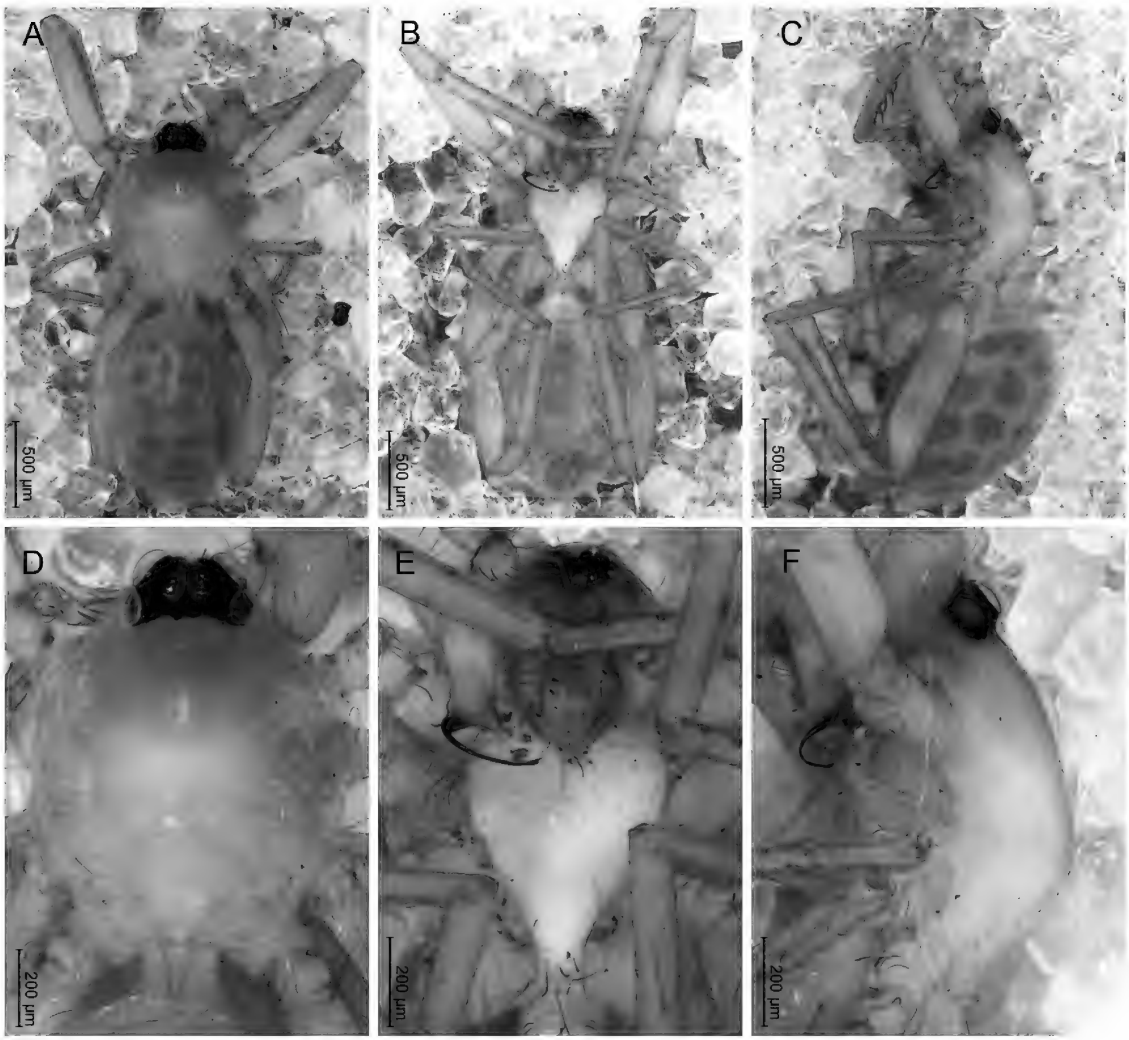


Fig. 64. *Neotrops sciosciae*, new species, male PBI_OON 15079. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

procurved from front; ALE separated by more than their diameter, ALE–PLE touching, PME touching, PLE–PME separated by PME radius to PME diameter. Sternum longer than wide, yellowish white, posterior margin extending posteriorly beyond anterior edges of coxae IV as single extension, anterior margin with deep incision of the stenum (for receiving posteriorly elongated labium) giving an elongated heart shape (fig. 64E); setae sparse, evenly scattered. Mouthparts: chelicerae, endites, and labium yellowish white. Chelicerae and endites yellow, labium orange, apparently more sclerotized than the sternum; cheliceral setae light, evenly scattered. Labium anterior margin with six or more setae, indented in middle, posterior margin with backward-pointing prolongation, which inserts into the anterior sternal margin (fig. 64E). Endites anteromedian part membranous, rebordered by a dark sclerotized lateral ridge. **Abdomen:** Dorsum light gray. Book lung covers ovoid. Postepigastric scutum yellow. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:**

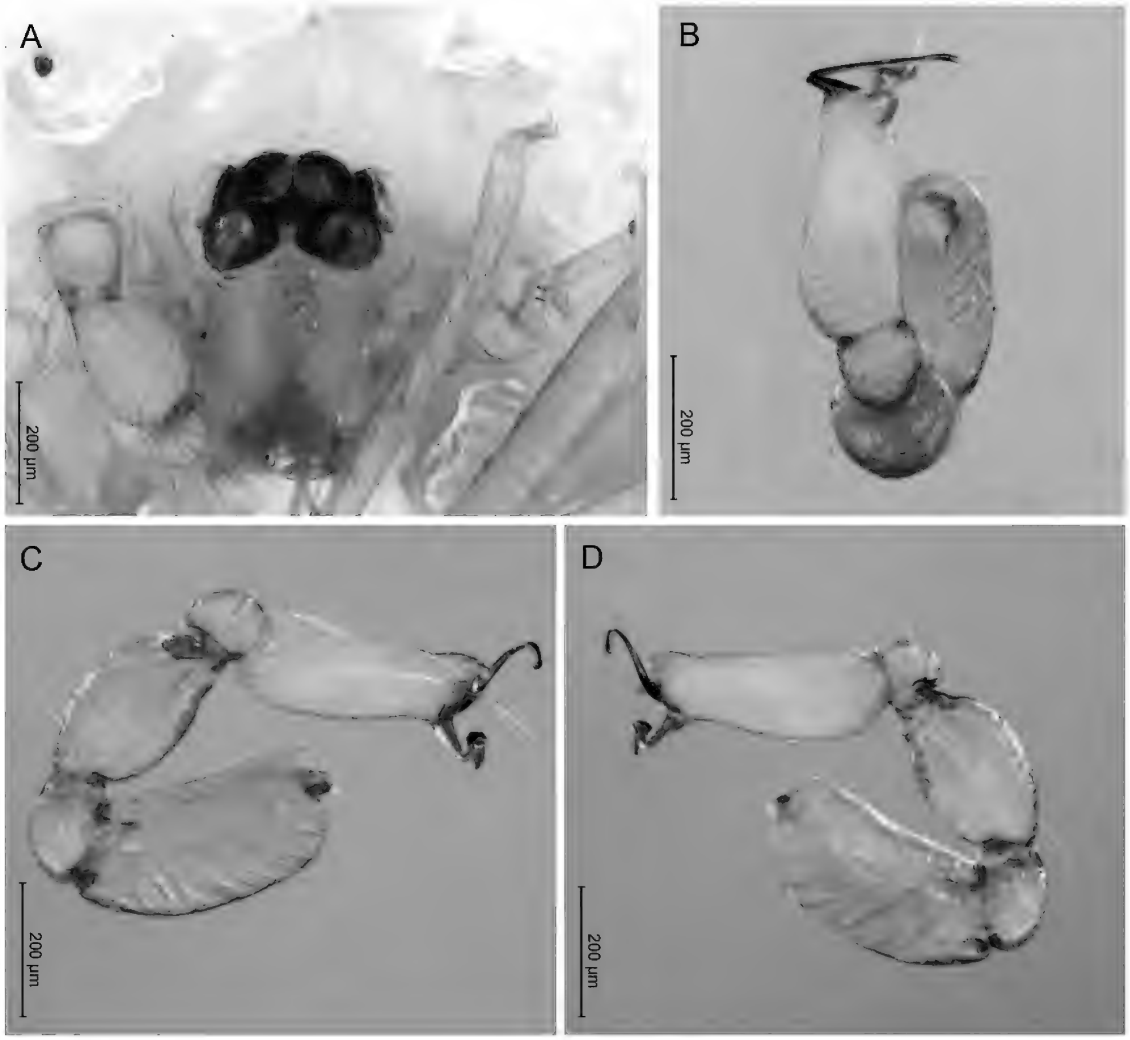


Fig. 65. *Neotrops sciosciae*, new species, male PBI_OON 15079. **A.** Carapace, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

Yellow; femora III and IV thickened. Leg spination: leg I: femora pv0-0-0-1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora pv0-0-0-1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d1-1 tibiae d2-2, v1, metatarsi v2ap; leg IV: femora d1-1-1 tibiae d2-1-2, v1 metatarsi v2ap. Trichobothria not examined. **Genitalia** (figs. 65B–D, 69D): Palp proximal segments yellow; with a translucent, small, acute conductor and an additional prolateral-ventral S-shaped projection, more sclerotized; femur normal size, two or more times as long as trochanter; cymbium yellow, ovoid in dorsal view, not fused with bulb; bulb white, more than two times as long as cymbium, slender, elongated; embolus dark.

FEMALE (PBI_OON 15080). Total length 2.30. As in male except as noted. **Cephalothorax:** Carapace broadly oval in dorsal view; nonmarginal pars cephalica setae dark, needlelike; nonmarginal pars thoracica setae dark, needlelike. Sternum precoxal triangles present, setae dark. Mouthparts: chelicerae, endites, and labium yellow. Chelicerae and endites yellow, labium orangish, not as sclerotized as in male; cheliceral setae dark. Labium with posterior prolongation (and sterna incision) not as extreme as in male

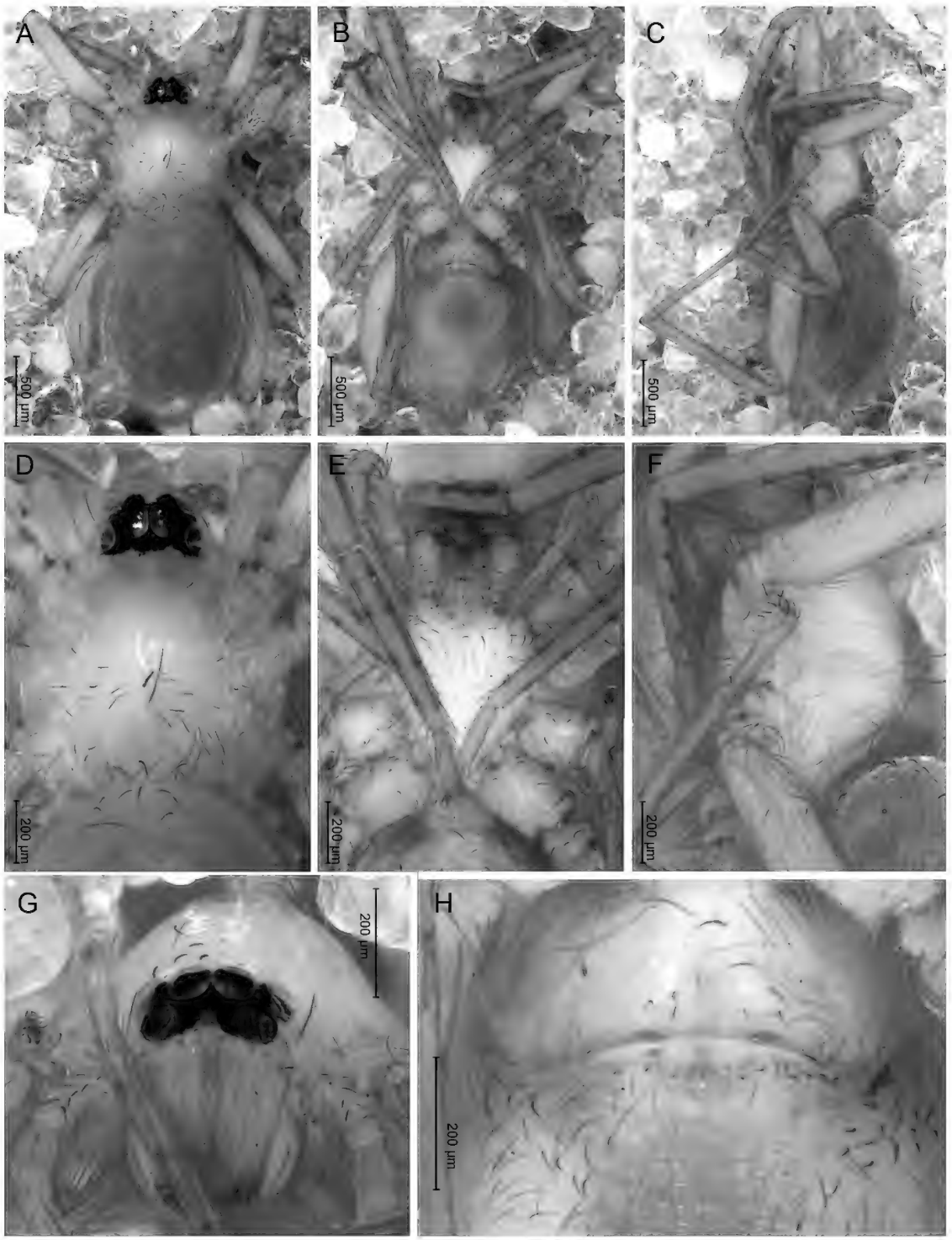


Fig. 66. *Neotrops sciosciae*, new species, female PBI_OON 15080. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Same, anterior view. **H.** Epigynum, ventral view.

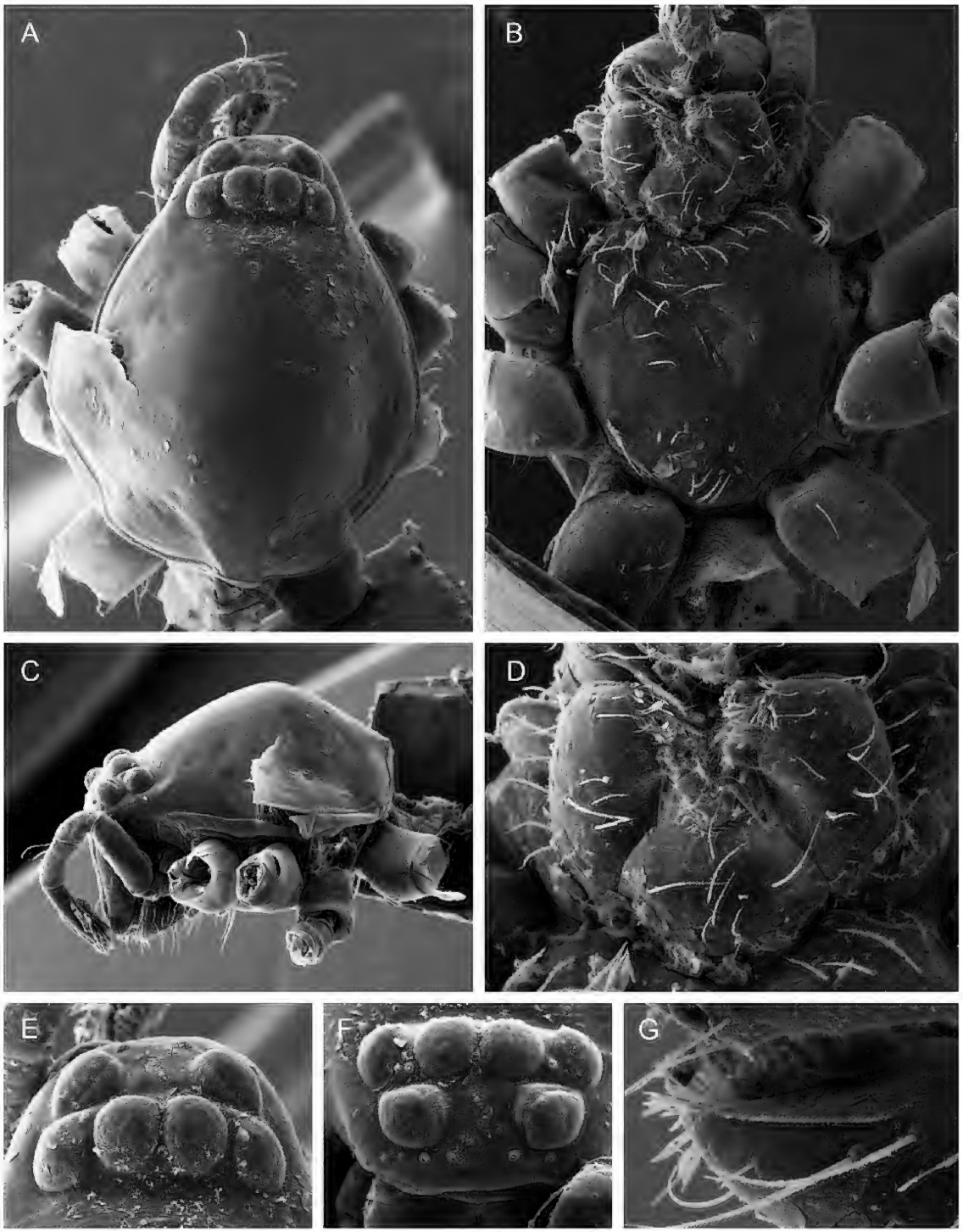


Fig. 67. *Neotrops sciosciae*, new species, female PBI_OON 14928. **A.** Carapace, dorsal view. **B.** Cephalothorax, ventral view. **C.** Same, lateral view. **D.** Mouthparts, ventral view. **E.** Ocular area, dorsal view. **F.** Same, anterior view. **G.** Serrula, lateral view.

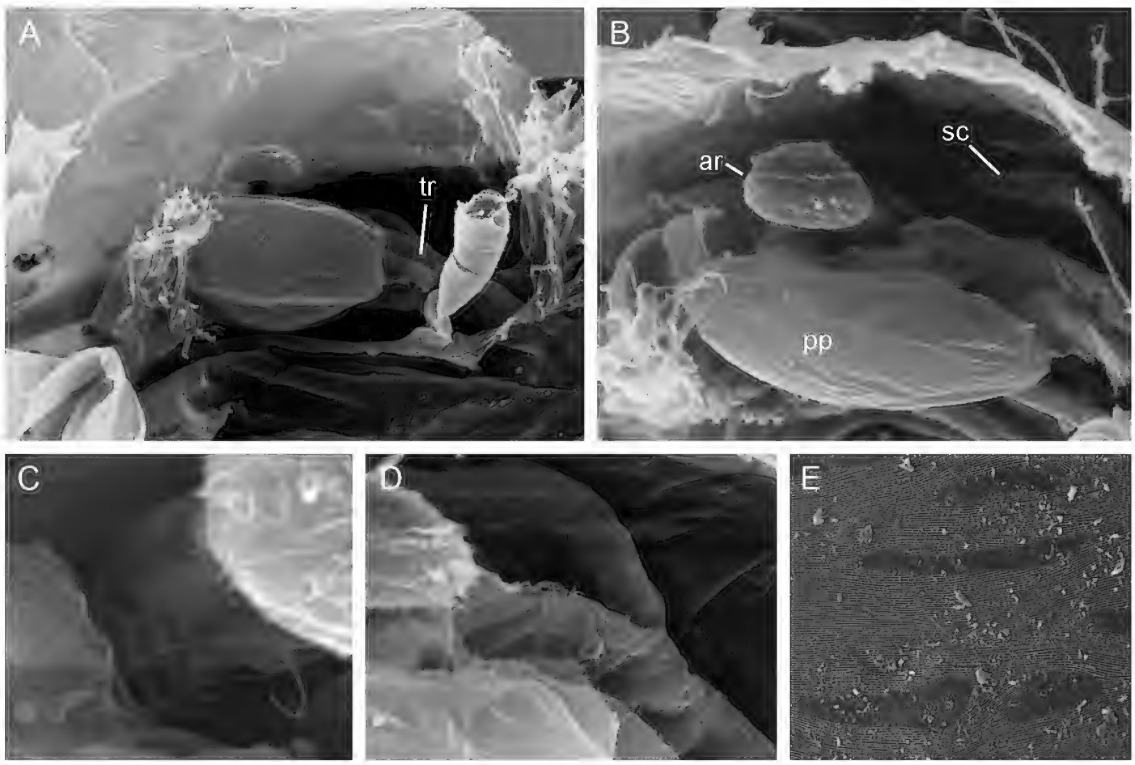


Fig. 68. *Neotrops sciosciae*, new species, female PBI_OON 14928. **A.** Internal female genitalia, dorsal view. **B.** Same, anterior view. **C.** Same, base of anterior receptacle, detail of the gland ducts at the base. **D.** Same, lateral sclerite. **E.** Carapace platelets. Abbreviations: **ar,** anterior receptacle; **pp,** posterodorsal plate; **sc,** lateral sclerite; **tr,** transverse ridges.

(fig. 66E). Palp spines absent. **Abdomen:** Dorsum light gray. Postepigastric area setae dark, needlelike. **Legs:** Patella plus tibia I nearly as long as carapace, femora III and IV thickened (not as much as in male). Leg spination: leg I: femora pv0-0-0-1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora pv0-0-0-1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d1-1, tibiae d2-2, v1, metatarsi d2-2, v2-3-2ap; leg IV: femora d1-1-1, tibiae d2-1-2; v1, metatarsi d2-2-1; v1-1-2ap. **Genitalia** (fig. 69C): Anterior receptacle relatively short, gradually widened distally, with an elongated stalk and mushroom-shaped distal "head," with accessory glands in distal part of stalk; posterior gonopore margin with small curved sclerites (figs. 66H, 68B, D, 69C, E–G). Variation: other specimens have the stalk of the anterior receptacle not at all widened (fig. 69E–G).

Other Material Examined: Same data as the types, 4♀ (MACN-Ar 26074 PBI_OON 15080); **Entre Ríos:** Dept. Colón: P. Nac. El Palmar, sendero a sitio histórico La Calera del Palmar, −31.86978° −58.20893°, 3 m, Aug. 06, 2011, Ramírez et al., MACN-Ar, 1♂ (MACN-Ar 27989 PBI_OON 42108); **Misiones:** 17 de Octubre, Oct. 01, 1954, 1♀ (MACN-Ar 20174 PBI_OON 14929); Santa María, Oct. 01, 1953, De Carlo, R. Schiapelli, Viana, M. Galiano (MACN-Ar 3777 PBI_OON 14786); Nov. 01, 1953, to Dec. 01, 1953, J.M. Viana, 1♀ (MACN-Ar 3514 PBI_OON 14793); June 01, 1960, J.M. Viana, 1♀ (MACN-Ar 20072 PBI_OON 14928). **URUGUAY: Rio Negro:** Fray Bentos, −33.11305°, −58.25138°, Mar. 24, 2009, 1♂, 1♀, 1 juvenile (FCE 2312 PBI_OON 42199); same locality, Dec. 20, 2007, 1♀ (FCE PBI_OON 42856).

Distribution: Isla Martín García (in the Río de la Plata estuary), eastern Entre Ríos, and Misiones, Argentina, and Río Negro, Uruguay (map 4).

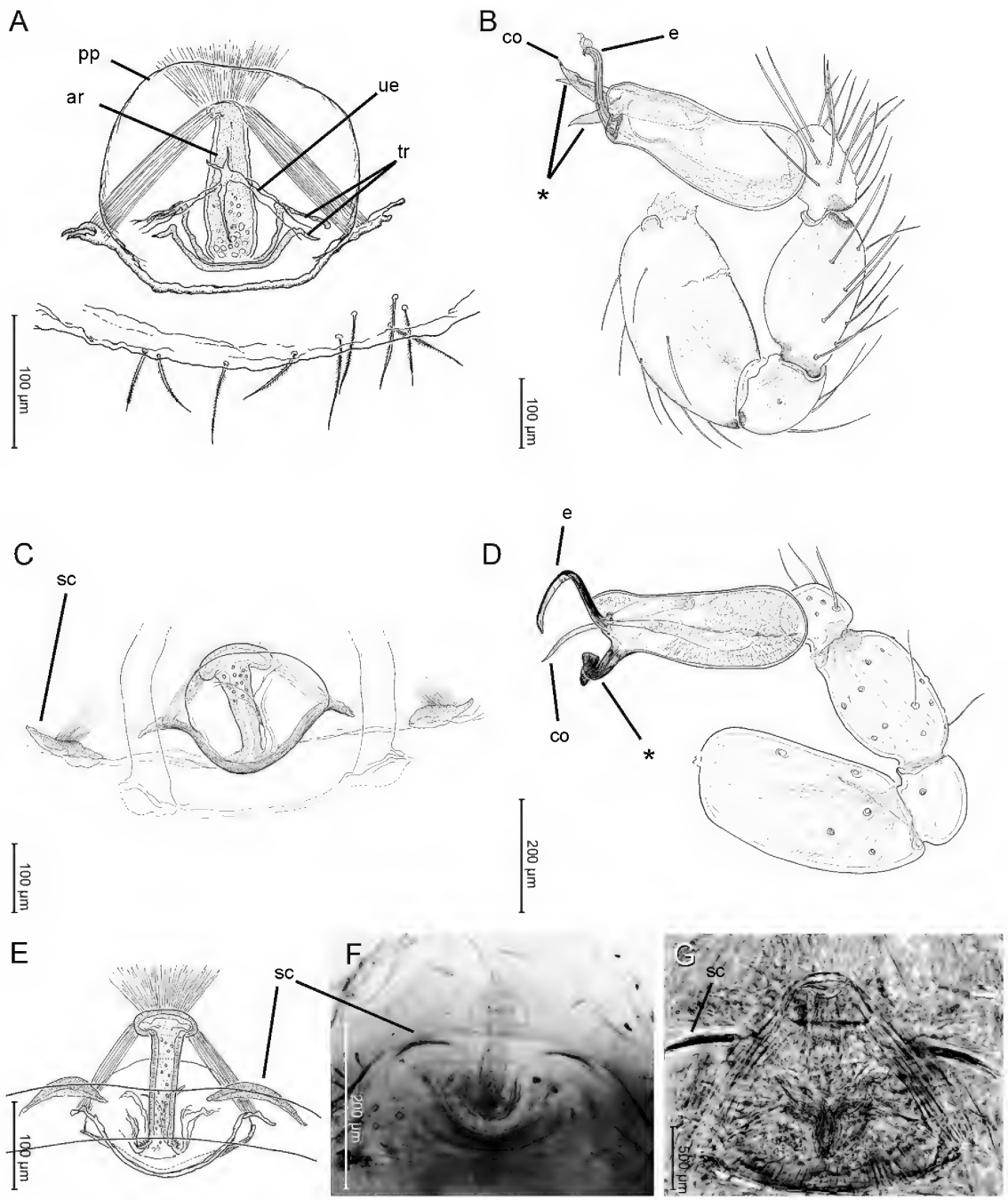


Fig. 69. *Neotrops* spp. genitalia, cleared. **A–B.** *Neotrops poguazu*, new species, **C–G**, *N. sciosciae,* new species. **A.** Internal female genitalia, dorsal view (PBI_OON 42069). **B.** Male palp, retrolateral view (PBI_OON 14767). **C, G,** Internal female genitalia, dorsal view, **E–F,** same, ventral view, **C, F** (PBI_OON 15080, two specimens), **E** (PBI_OON 14793), **G** (PBI_OON 14786). **D.** Male palp, retrolateral view (PBI_OON 15079). Abbreviations: **ar,** anterior receptacle; **co,** conductor; **e,** embolus; **pp,** posterodorsal plate; **tr,** transverse ridges; **sc,** lateral sclerites; **ue,** uterus externus; asterisk (*) = additional distal apophysis.

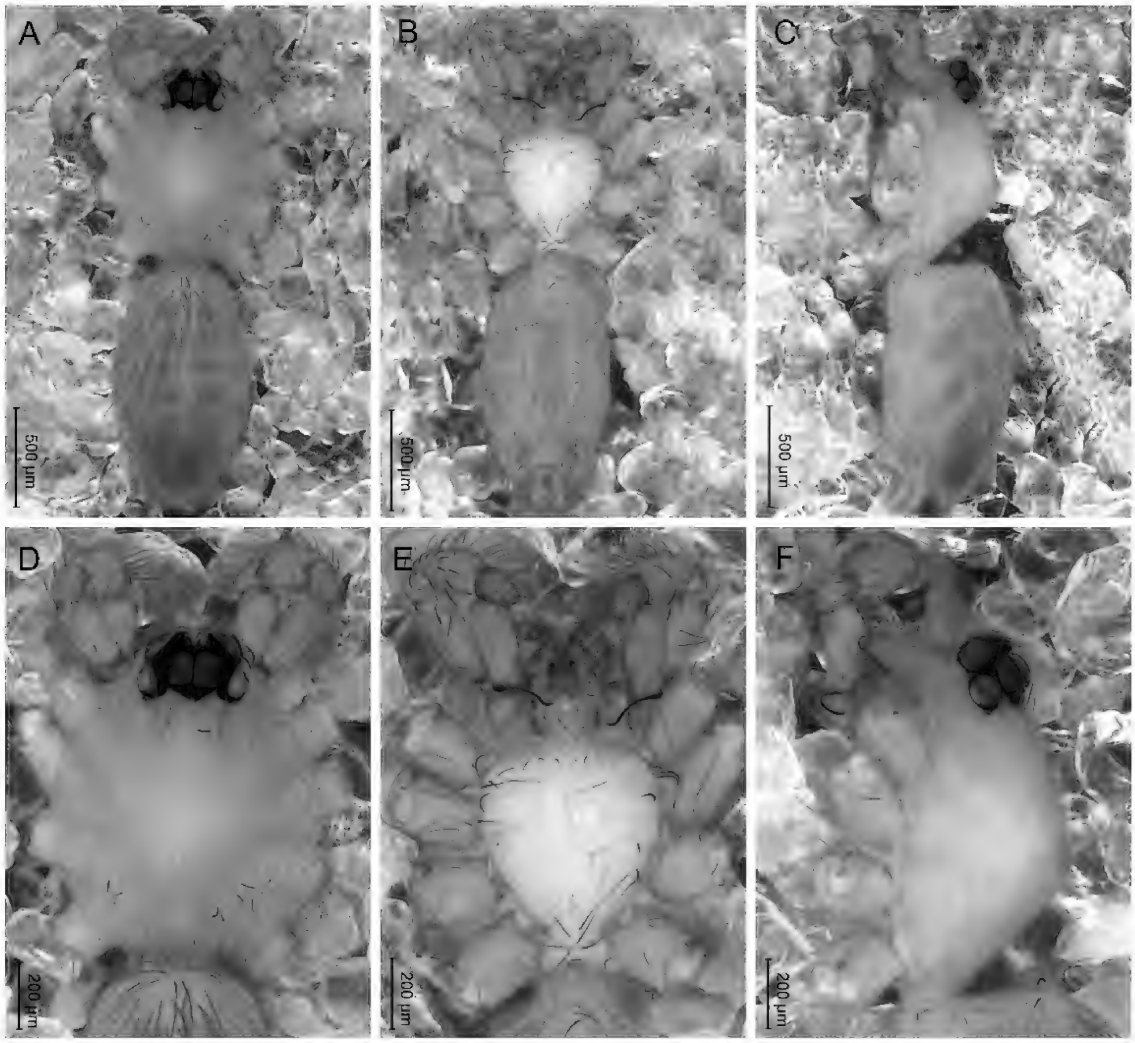


Fig. 70. *Neotrops labarquei*, new species, male PBI_OON 14891. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

NATURAL HISTORY: The male from El Palmar was collected by hand at night, wandering in the low foliage in a gallery forest near the Uruguay River.

Neotrops labarquei, new species
Figures 70–72, 76A–B; map 5

TYPES: Male holotype (MACN-Ar 17989 PBI_OON 14891) and two female paratypes (MACN-Ar 17991 PBI_OON 14894, MACN-Ar 18059 PBI_OON 14904 respectively) from Uruguay: Rivera: Route 30 at the highest point of "Cuchilla" (low mountains), 344 m, −31.14041°, −55.91986°, Dec. 13, 2005, F. Labarque, A. Ojanguren, C. Mattoni col. Deposited in MACN-Ar.

ETYMOLOGY: The specific epithet is a patronym in honor of Facundo M. Labarque (MACN), one of the collectors of all known specimens of this species and also a true specialist "hunter" of oonopids and many other tiny spiders from the Neotropical region.

DIAGNOSIS: Among the species of the *poguazu* group, *N. labarquei* resemble *N.*

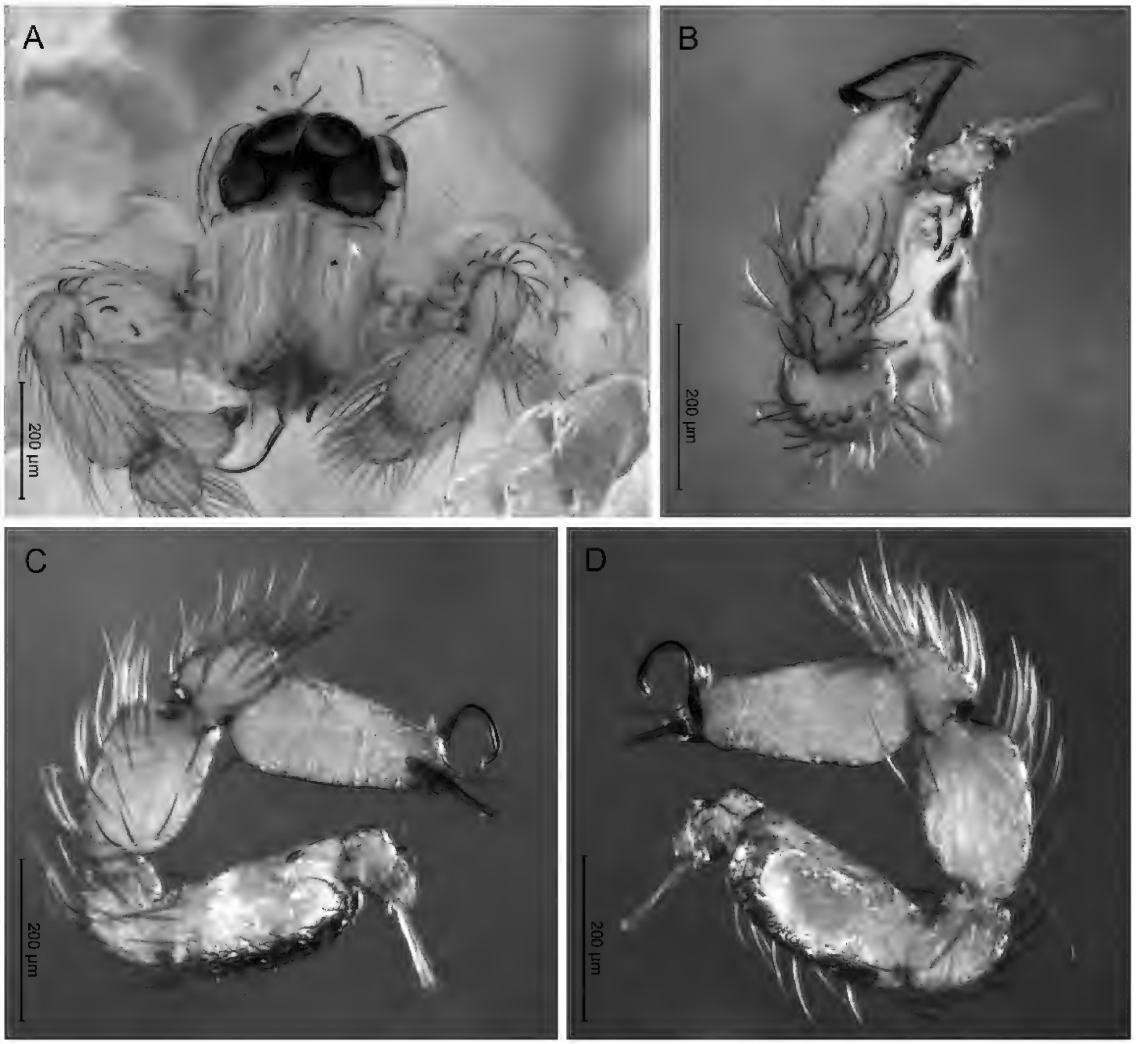


Fig. 71. *Neotrops labarquei*, new species, male PBI_OON 14891. **A.** Carapace, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

lopardoae in having the anterior margin of the sternum straight (figs. 70E, 72E), but differs by the relatively shorter male bulb (figs. 71B–D, 76B) and longer stalk of the female anterior receptacle (fig. 76A).

DESCRIPTION: MALE (holotype, PBI_OON 14891, all legs missing). Total length 2.22. **Cephalothorax:** Carapace yellow, ovoid in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to less than half their maximum width; lateral margin straight; nonmarginal pars cephalica setae dark, needlelike, scattered; nonmarginal pars thoracica setae dark, needlelike, setae lost (bases remain); marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes all subequal, all eyes circular; posterior eye row procurved from front; ALE separated by their radius to diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum as long as wide, yellow, anterior margin unmodified, posterior margin extending posteriorly beyond anterior edges of coxae IV as single extension; setae sparse,

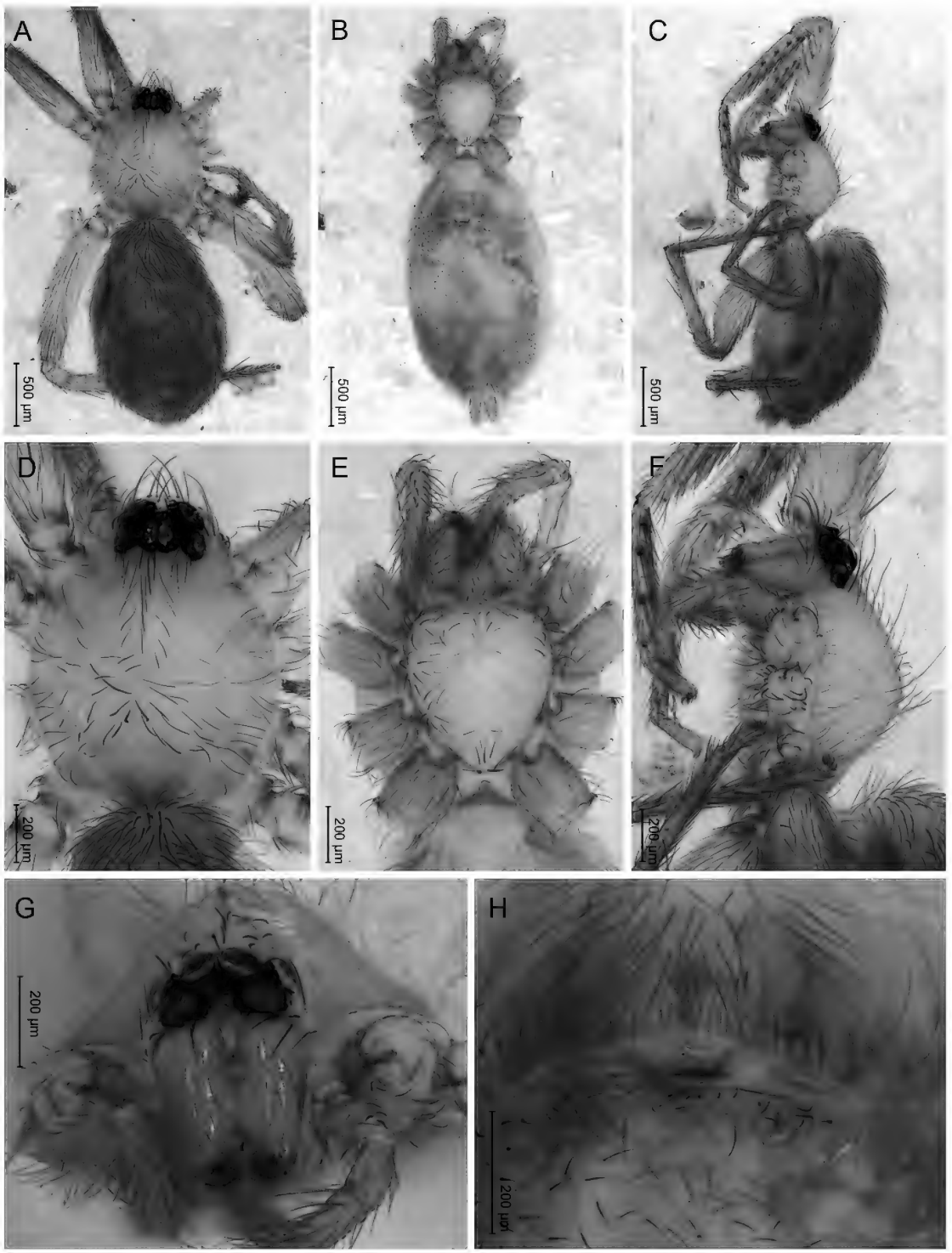


Fig. 72. *Neotrops labarquei*, new species, female (**A, C–D, F–G**, PBI_OON 14904**; B, E, H**, PBI_OON 14894). **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Same, anterior view. **H.** Epigynum, ventral view.

evenly scattered (fig. 70E). Mouthparts: chelicerae, endites, and labium yellow; cheliceral setae dark, evenly scattered. Labium anterior margin indented at middle; with six or more setae on anterior margin. Endites distally not excavated, anteromedian part membranous, rebordered by a dark sclerotized lateral ridge and two medial darkened and forward-directed blunt projections (fig. 70E). **Abdomen:** Dorsum light gray. Book lung covers ovoid. Postepigastric scutum yellow. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Genitalia** (figs. 71B–D, 76B): Palp proximal segments yellow; femur normal size, two or more times as long as trochanter; cymbium yellow, ovoid in dorsal view, not fused with bulb; bulb white, more than two times as long as cymbium, slender, elongated, distal part with a translucent acute conductor and an additional prolateral-ventral projection, more sclerotized, with a slightly widened tip; embolus dark.

FEMALE (PBI_OON 14904). Total length 2.77. As in male except as noted. **Cephalothorax:** Carapace broadly oval in dorsal view. Eyes ALE, PME subequal, larger than PLE. Sternum precoxal triangles present; setae dark. Palp spines absent. **Abdomen:** Dorsum light gray. Postepigastric area setae dark, needlelike. **Legs:** Yellow; femur IV thickened, much larger than femora I–III, patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora d0-1-1, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora d0-1-1, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d1-1, tibiae p1-1, d0-1-0, r0-0-1, v1ap, metatarsi p1-0-1, v1ap, r0-1-0; leg IV: femora d1-1-1, tibiae p1-0-1-0, r1-0-1-0, v0-1-0-2ap, metatarsi d1-0-1-1, r1-1-1-1, p1-1-1-1, v0-1-0-2ap. **Genitalia** (fig. 76A): Anterior receptacle long, with an elongated stalk and a mushroom-shaped distal "head," accessory glands located along entire stalk length; anterior and posterior ridges without evident locking mechanism, with wide V-shaped anterior margin, visible through the cuticle; uterus externus opening longitudinal.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Known only from the type locality, in Rivera Department, Uruguay (map 5).

Neotrops lopardoae, new species
Figures 73–75, 76C–D; map 5

TYPES: Male holotype and two female paratypes from Argentina: Misiones Province: Parque Nacional Iguazú, Pto. Canoas, 200 m, Dec. 08, 1990, to Jan. 06, 1991, S., J. Peck (PBI_OON 1861), deposited in AMNH; one additional female paratype (together o ne juvenile) from Misiones Province: San Pedro: Parque Provincial Cruce Caballero, −26.46666°, −56.96666°, Jan. 13, 2005, to Jan. 16, 2005, C. Grismado, L. Lopardo, L. Piacentini, A. Quaglino, G. Rubio (MACN-Ar 15359 PBI_OON 14796), deposited in MACN-Ar.

ETYMOLOGY: The specific name of this species is a patronym in honor of Lara Lopardo, co-collector of this species in Cruce Caballero, in recognizion of her help and support in the 2005 trip to Misiones.

DIAGNOSIS: Among the species of the *poguazu* group, *N. lopardoae* resembles *N. labarquei* in having a sternum with a straight anterior margin (figs. 73E, 75E), but differs by the relatively longer male bulb (figs. 74B–D, 76D) and a shorter female anterior receptacle, strongly widened distally (fig. 76C).

DESCRIPTION: Male (holotype, PBI_OON 1861). **Cephalothorax:** Carapace pale orange, ovoid in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to less than half their maximum width; lateral margin straight; nonmarginal pars cephalica and pars thoracica setae lost (bases remain); marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes ALE, PME subequal, larger than PLE, ALE circular, PME circular, PLE oval; posterior eye row procurved from front; ALE separated by their radius to diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum as long as wide, pale orange, anterior margin unmodified, posterior margin extending posteriorly beyond anterior edges of coxae IV as single extension; setae sparse, evenly scattered (fig. 73E). Mouthparts: chelicerae, endites, and labium pale orange; cheliceral setae dark, evenly scattered. Labium anterior margin not indented at middle; with six or more setae on

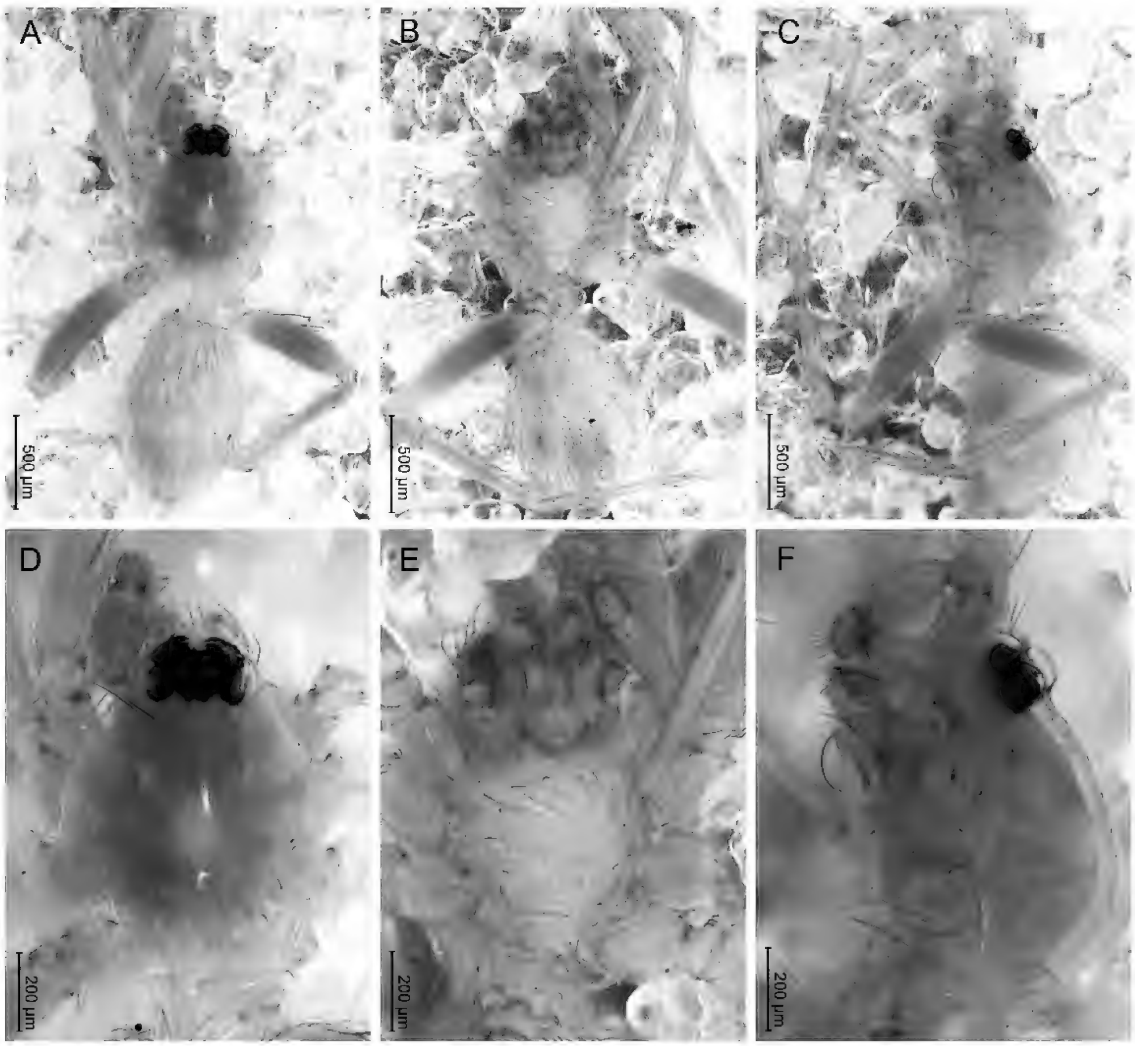


Fig. 73. *Neotrops lopardoae*, new species, male PBI_OON 01861. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

anterior margin. Endites anteromedian tip with backward folded ridge, anteromedian part less sclerotized, lateral ridges with acute tips medially oriented (fig. 73E). **Abdomen:** Dorsum pale gray. Book lung covers ovoid. Postepigastric scutum pale orange. Spinneret scutum absent. Dorsum setae dark, needle-like. Colulus represented only by setae. **Legs:** Pale orange; femur IV thickened, much larger than femora I–III. Leg spination: leg I: femora d0-1-0, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: femora d0-1-0, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg IV: femora d0-1-1-0, tibiae d0-1-0, p1-0-0, v0-1-0-2, metatarsi d0-1-2, p0-1-1, v0-0-1, r0-1-1. Trichobothria not examined. **Genitalia:** Palp proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, not fused with bulb; bulb white, more than two times as long as cymbium, slender, elongated, distal part with conductor translucent, acute, short; additional process prolateral, ventral, darkened, sclerotized, terminating in two short prongs; embolus dark (figs. 73B–D, 76D).

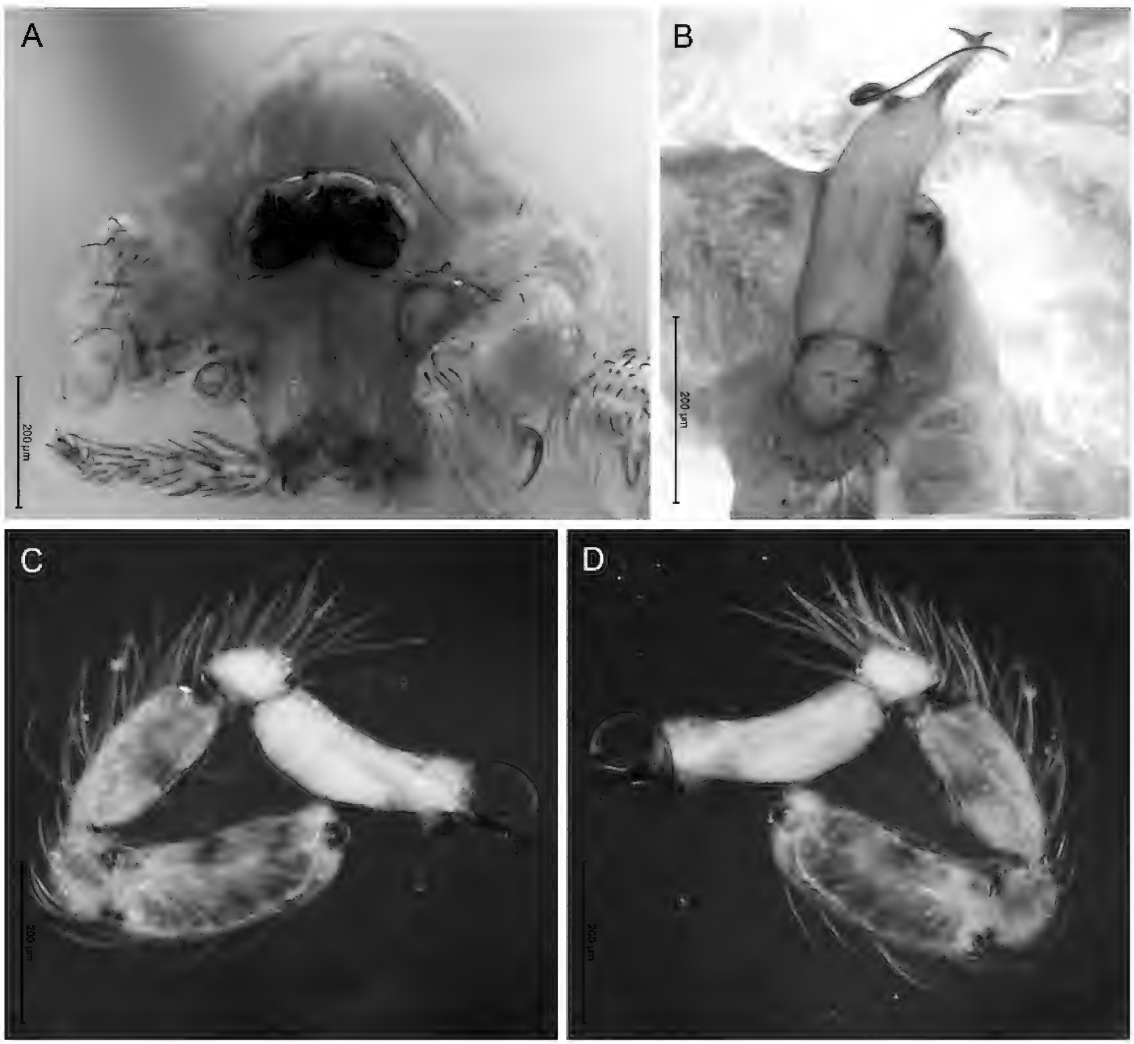


Fig. 74. *Neotrops lopardoae*, new species, male PBI_OON 01861. **A.** Carapace, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

Female (PBI_OON 14796). As in male except as noted. **Cephalothorax:** Carapace broadly oval in dorsal view; nonmarginal pars cephalica setae dark, needlelike, in one row; nonmarginal pars thoracica setae dark, needlelike. Sternum precoxal triangles present; setae dark. Labium elongated hexagon. Palp spines absent. **Abdomen:** Dorsum light gray. Postepigastric area setae dark, needlelike. Colulus absent. **Legs:** Patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora d0-1-1-1-0, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora d0-1-0-1-0, pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d0-1-1, tibiae d0-1-0, r0-1-0, p1-1, v2-2, metatarsi d0-2-2, v1-1; leg IV: femora d0-1-1-0-1-0, tibiae d0-1-0, p1-0-1, r1-0-1, v0-1-2, metatarsi v0-1-2, p1-1, d0-0-1, r1-1. **Genitalia** (fig. 76C): Anterior receptacle elongated, with accessory glands along entire length of "stalk," which is apically widened; locking mechanism not evident, with only a longitudinal, unsclerotized opening between receptacle and posterodorsal plate (presumed opening of the uterus externus).

Other Material Examined: **ARGENTINA: Misiones:** P.N. Iguazú, Sendero Ma-

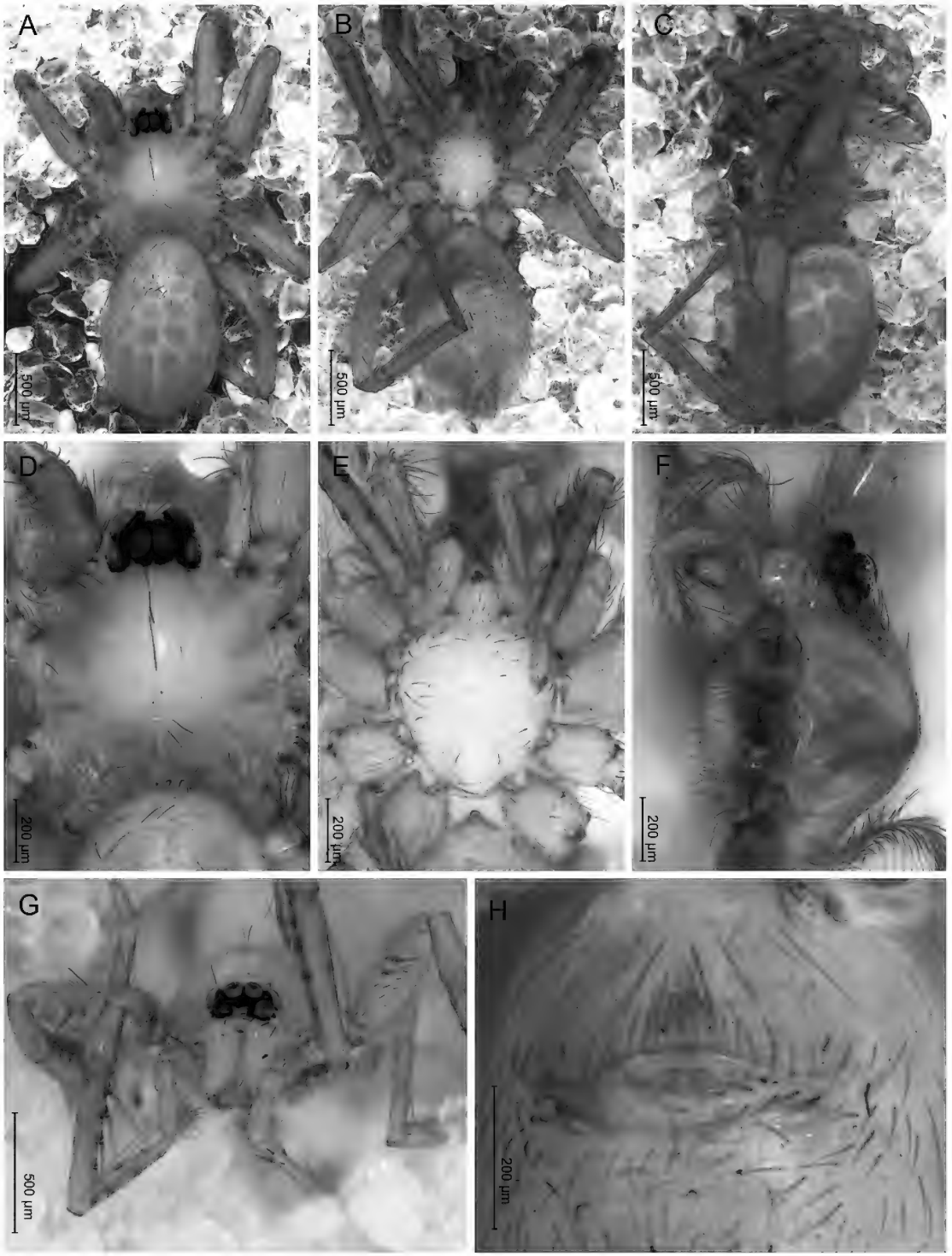


Fig. 75. *Neotrops lopardoae*, new species, female (**A–E, G–H,** PBI_OON 14796; **F,** PBI_OON 14790). **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Same, anterior view. **H.** Epigynum, ventral view.

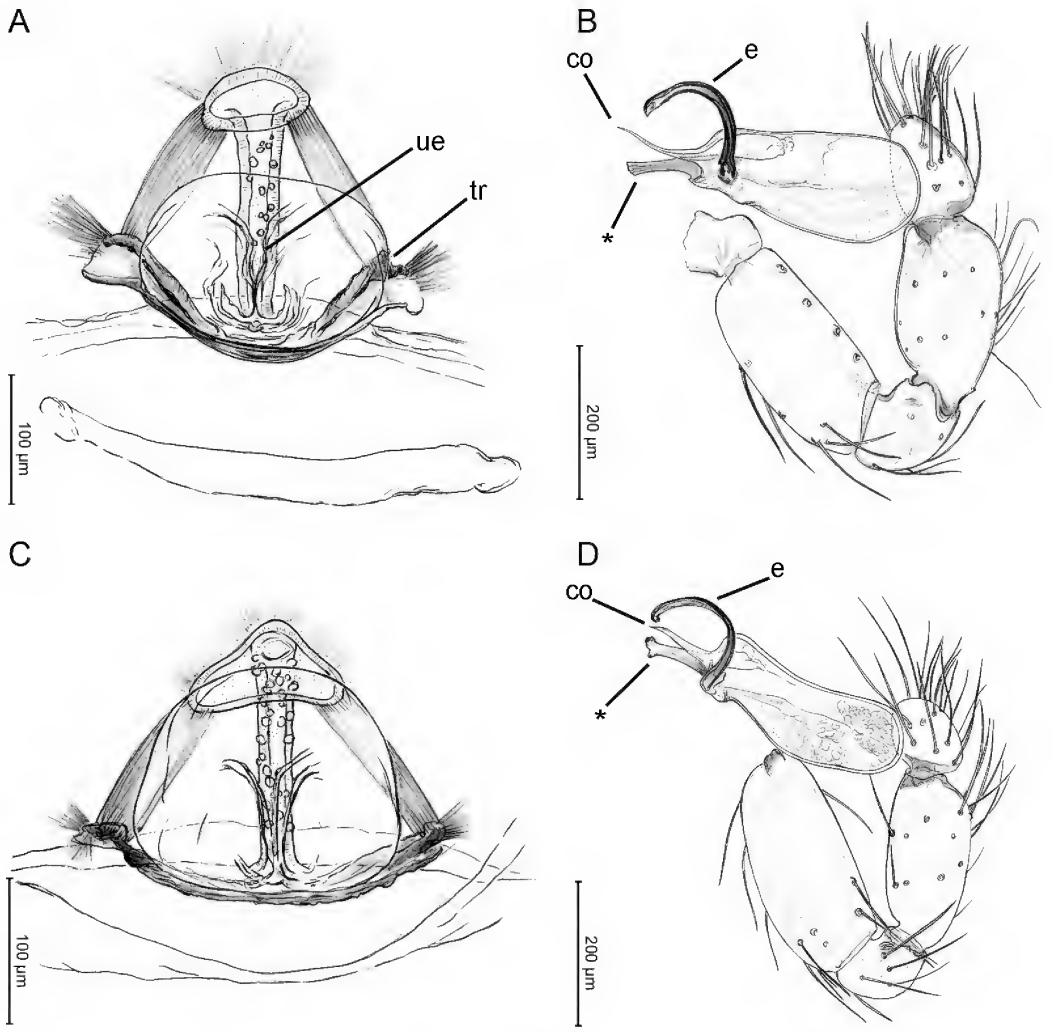


Fig. 76. *Neotrops* spp. genitalia, cleared. **A–B.** *Neotrops labarquei*, new species, **C–D**, *N. lopardoae,* new species. **A.** Internal female genitalia, dorsal view (PBI_OON 14894). **B.** Male palp, retrolateral view (PBI_OON 14891). **C.** Internal female genitalia, dorsal view (PBI_OON 14796). **D.** Male palp, retrolateral view (PBI_OON 01861). Abbreviations: **co,** conductor; **e,** embolus; **tr,** transverse ridges; **ue,** uterus externus; asterisk (*) = additional distal apophysis.

cuco, Área Cataratas, subtropical forest, June 11, 1993, M. Di Vitteti, 1♀ (MACN-Ar 27477 PBI_OON 43189); San Pedro: Parque Provincial Cruce Caballero, −26.46666°, −56.96666°, Jan. 13, 2005, to Jan. 16, 2005, C. Grismado, L. Lopardo, L. Piacentini, A. Quaglino, G. Rubio, 1♀ (MACN-Ar 15358 PBI_OON 14790).

DISTRIBUTION: Known only from Misiones Province (map 5).

The *platnicki* Group

DIAGNOSIS: Males with fusiform to elongated palpal bulbs with a complex conductor; both sexes lack the prolateral ventral macrosetae of the femora I and II, and also have relatively enlarged femora IV, as in the previous group. Two species (*N. silvae* and *pithecia*) have the copulatory bulb partially fused with the cymbium (fig. 86D, F).

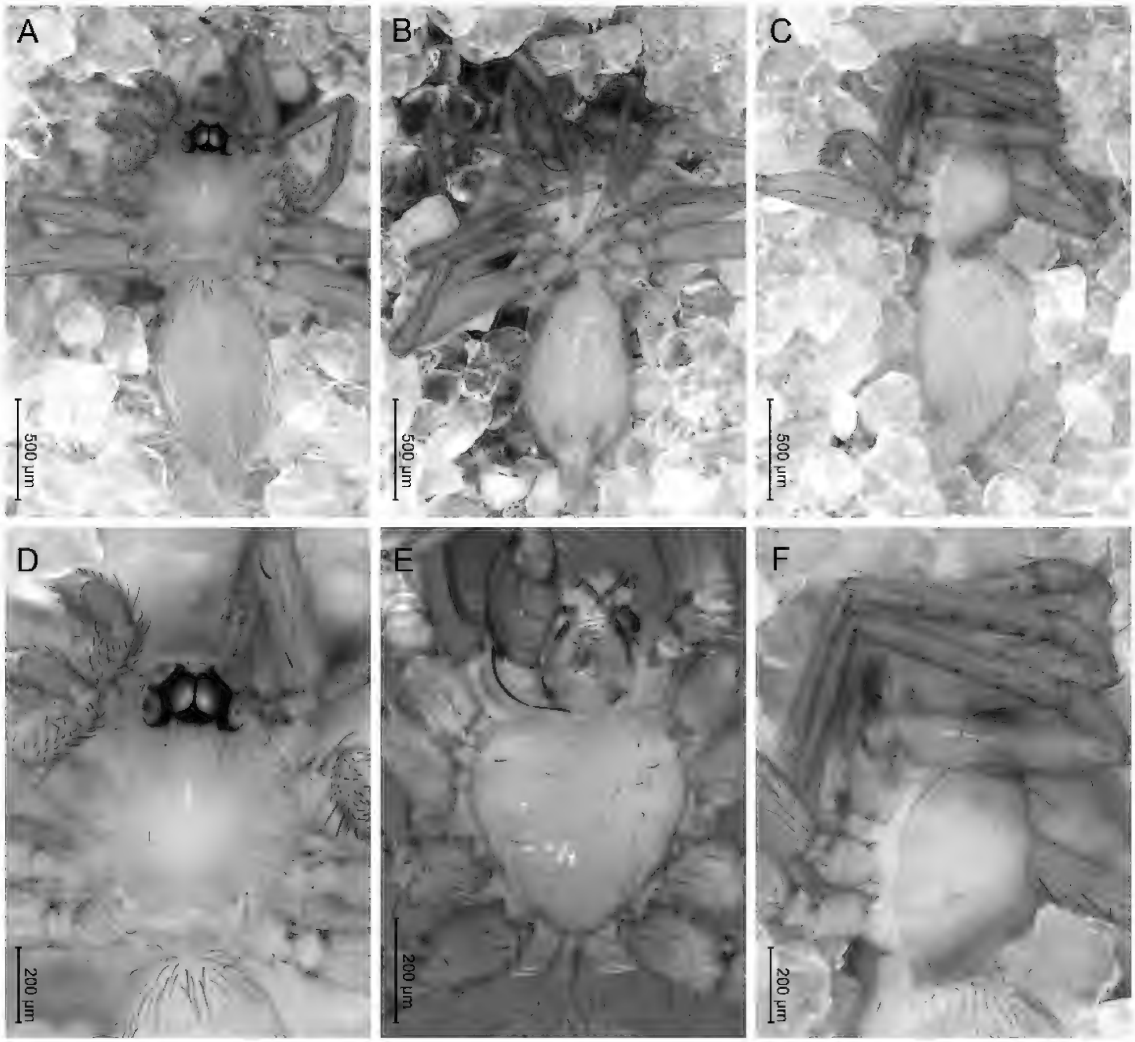


Fig. 77. *Neotrops platnicki*, new species, male PBI_OON 30567. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

This group comprises three species that seems to be restricted to the upper Amazon region of Peru and Ecuador. All the species were found on the foliage of trees in tropical rainforests.

Neotrops platnicki, new species
Figures 77–79, 86A–B; map 7

TYPES: Male holotype from Ecuador: Napo: Jatun Sacha biological station, tropical forest, 410 m, −1.06597°, −77.61672°, Dec. 01, 2009, to Dec. 05, 2009, C.J. Grismado and F.M. Labarque (Niarchos Expedition) (QCAZ PBI_OON 30567); deposited in QCAZ, and female paratype from Ecuador: Napo: Parque Nacional Napo-Galeras, wet forest, forest canopy, 1005 m, −0.74361°, −77.59138°, Nov. 27, 2009 (Niarchos Expedition, MACN-Ar 26907 PBI_OON 30620); deposited in MACN-Ar.

ETYMOLOGY: The specific name is a patronym in honor of Norman I. Platnick, leader of the PBI project and also of the sucessful Niarchos Expedition to Ecuador, and in recognition of his tremendous contri-

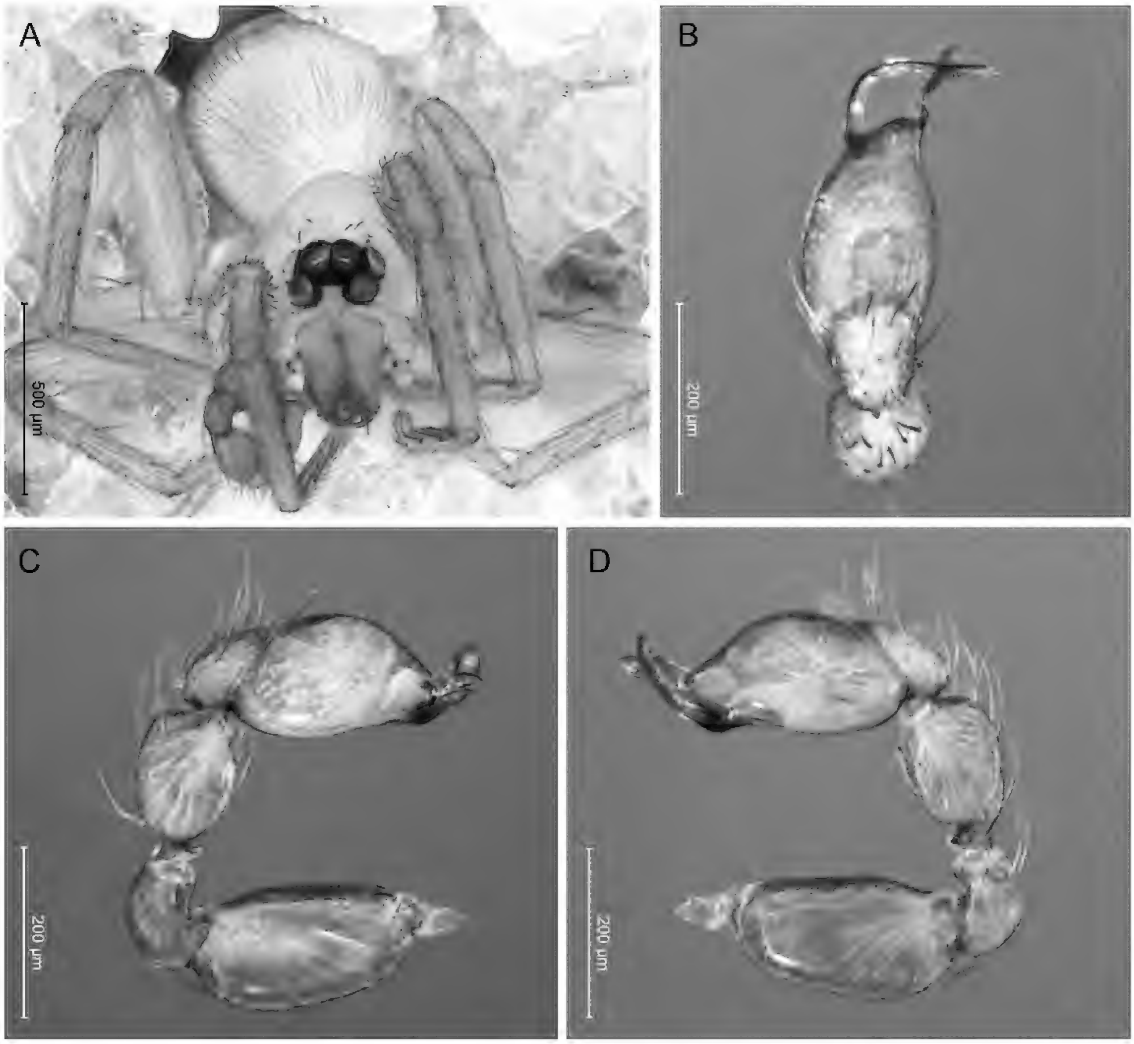


Fig. 78. *Neotrops platnicki*, new species, male PBI_OON 30567. **A.** Habitus, anterodorsal view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

bution to the knowledge of the taxonomy of the family Oonopidae.

DIAGNOSIS: Of the species in the *platnicki* group, *N. platnicki* resembles *N. pithecia* in having an ovoid palpal bulb, but differs in the shape of the conductor and embolus, and in having the bulb clearly separated from the cymbium (figs. 78B–D, 86B). The female differs from others in the group by the long anterolateral projections of the anterior receptacle (figs. 79H, 86A).

DESCRIPTION: MALE (holotype, PBI_OON 30567). Total length 1.74. **Cephalothorax:** Carapace yellow, ovoid in dorsal view, pars cephalica slightly elevated in lateral view, anteriorly narrowed to between 0.5 and 0.75 times its maximum width; lateral margin straight; nonmarginal pars cephalica setae dark, needlelike, scattered; nonmarginal pars thoracica setae absent; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes all subequal, all circular; posterior eye row straight from front; ALE separated by their radius to diameter, ALE-PLE touching, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum as long as wide, yellowish white, anterior margin unmodified,

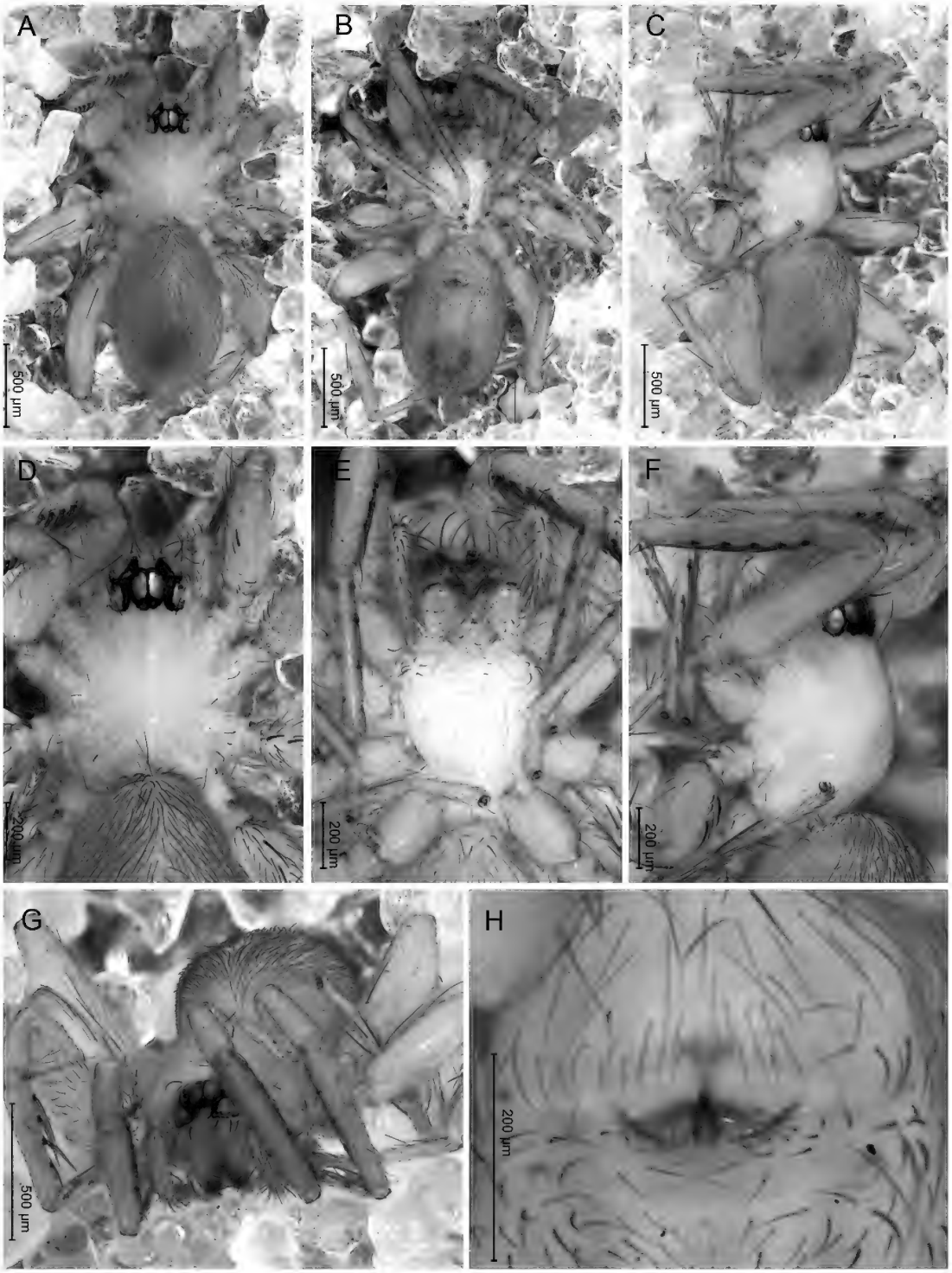


Fig. 79. *Neotrops platnicki*, new species, female PBI_OON 30620. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

Map 7. Records of *Neotrops waorani* (triangles) and *N. platnicki* (circles).

posterior margin not extending posteriorly of coxae IV; setae sparse, evenly scattered. Mouthparts: chelicerae, endites, and labium yellow; cheliceral setae light, evenly scattered. Labium anterior margin indented at middle; with six or more setae on anterior margin. Endites with median, longitudinal ridge and anterolateral rounded projections, dark, heavily sclerotized (fig. 77E). **Abdomen:** Dorsum pale white. Book lung covers elliptical. Postepigastric scutum yellow. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:** Yellow; femur IV slightly thicker than femora I–III. Leg spination: leg I: femora d1-1, tibiae v2-2-2-2-2-0; metatarsi v2-2-2-2; leg II: femora d1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d1-1-1, tibiae d1, p1-1, r1-1, v1-2ap, metatarsi p1-1, r1-1, v1-2ap; leg IV: femora d1-1-1, tibiae d1, p1-1, r1-1, v1-2ap, metatarsi p1-1, r1-1, v1-2ap. Trichobothria not examined. **Genitalia:** Palp proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, not fused with bulb; bulb pale orange, more than two times as long as cymbium, slender, ovoid; sperm duct long, relatively conspicuous, apparently originating from center of bulb; extending distally, then proximally, before looping back toward the embolus; middle loop with distal thickening from which point it becomes less sclerotized before leading into embolus; conductor complex, with ventral, pointed translucent flange and second branch anteriorly directed, sclerotized and with folded tip; embolus dark, relatively long and thick, apex overlaps tip of conductor (figs. 78B–D, 86B).

Female (PBI_OON 30620). Total length 1.79. As in male except as noted. **Cephalothorax:** Carapace broadly oval in dorsal view; nonmarginal pars cephalica setae absent. Eyes PME oval, PLE oval. Sternum longer than wide, precoxal triangles present; setae dark. Labium elongated hexagon. Palp: spines absent, three trichobotria on the tibia. **Abdomen:** Postepigastric area setae dark, needlelike. **Legs:** Patella plus tibia I nearly as long as carapace, femur IV slightly thicker than femora I–III. Leg spination: leg I: femora d1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora d1-1, tibiae v2-2-2-2-2-0, metatarsi d0-1, v2-2-2-2; leg III: femora d1-1-1, tibiae d1, p1-1, r1-1, v1-2ap, metatarsi p1-1, r1-1, v1-2ap; leg IV: femora d1-1-1, tibiae d1, p1-1, r1-1, v1-2ap, metatarsi d0-1, p1-1, r1-1, v1-2ap. **Genitalia** (figs. 79H, 86A): Anterior receptacle with transversely expanded tip with pointed lateral extensions

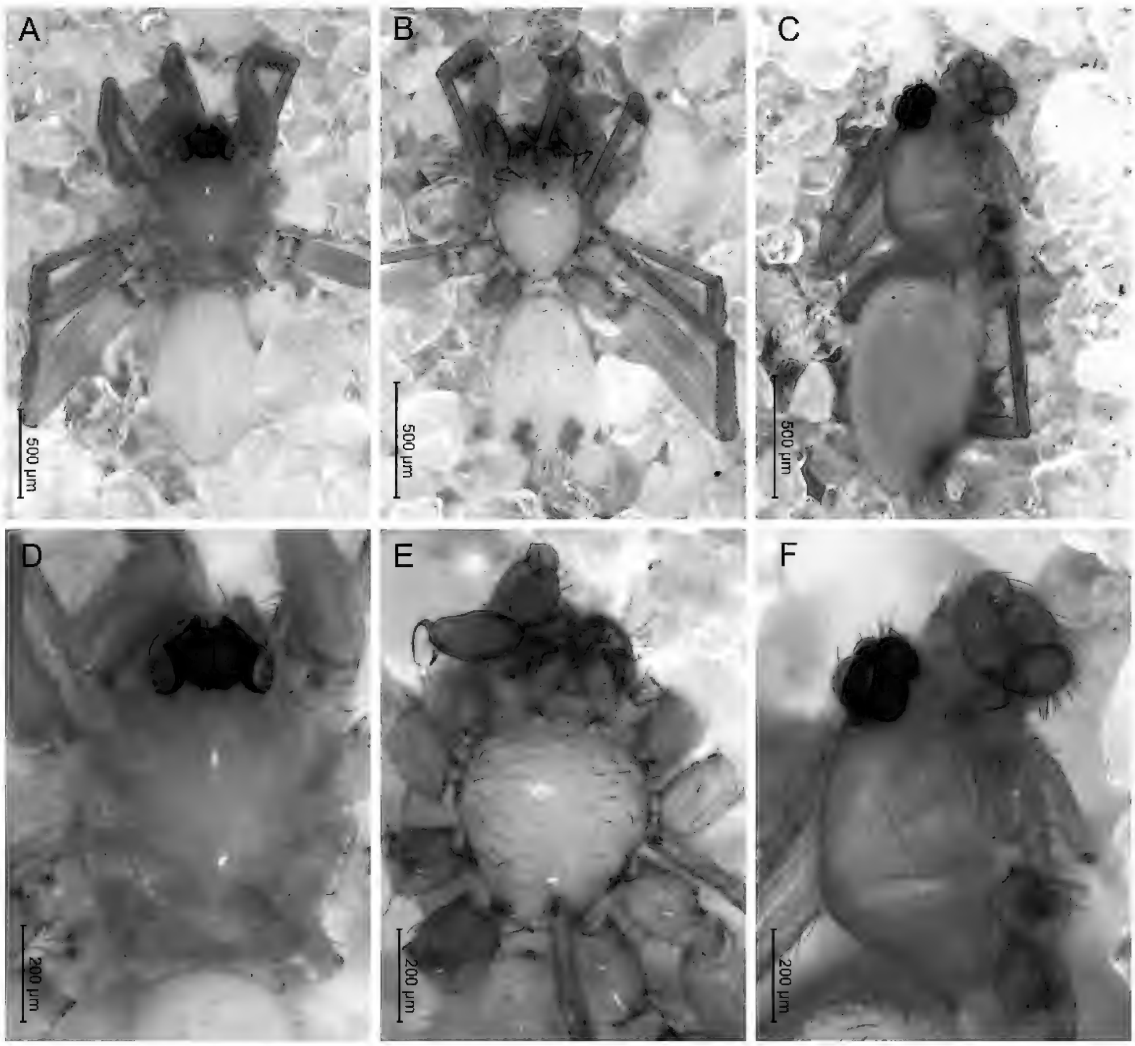


Fig. 80. *Neotrops pithecia*, new species, male PBI_OON 43168. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

from which muscles arise to the transverse ridge; gland ducts not visible, but with probable small vesicle at stalk base; ventral ridges with strong indentation at middle, the presumed copulatory opening.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Amazonic rainforest in Napo Province, Ecuador (map 7).

NOTE: The male and female were not collected together, but are matched by geographical proximity and similar somatic morphology.

Neotrops pithecia, new species
Figures 80–82, 86C–D; map 8

TYPES: Male holotype from Peru: Loreto: Río Samiria, −5.11666°, −75.46666°, May 01, 1990, to June 01, 1990, T. Erwin, D. Silva (MUSM PBI_OON 43168); 1♀ and 2♂ Paratypes (MUSM PBI_OON 43168) with same data. Deposited in MUSM.

ETYMOLOGY: The specific epithet is a noun in apposition taken from one of the localities (Pithecia) where this species was collected.

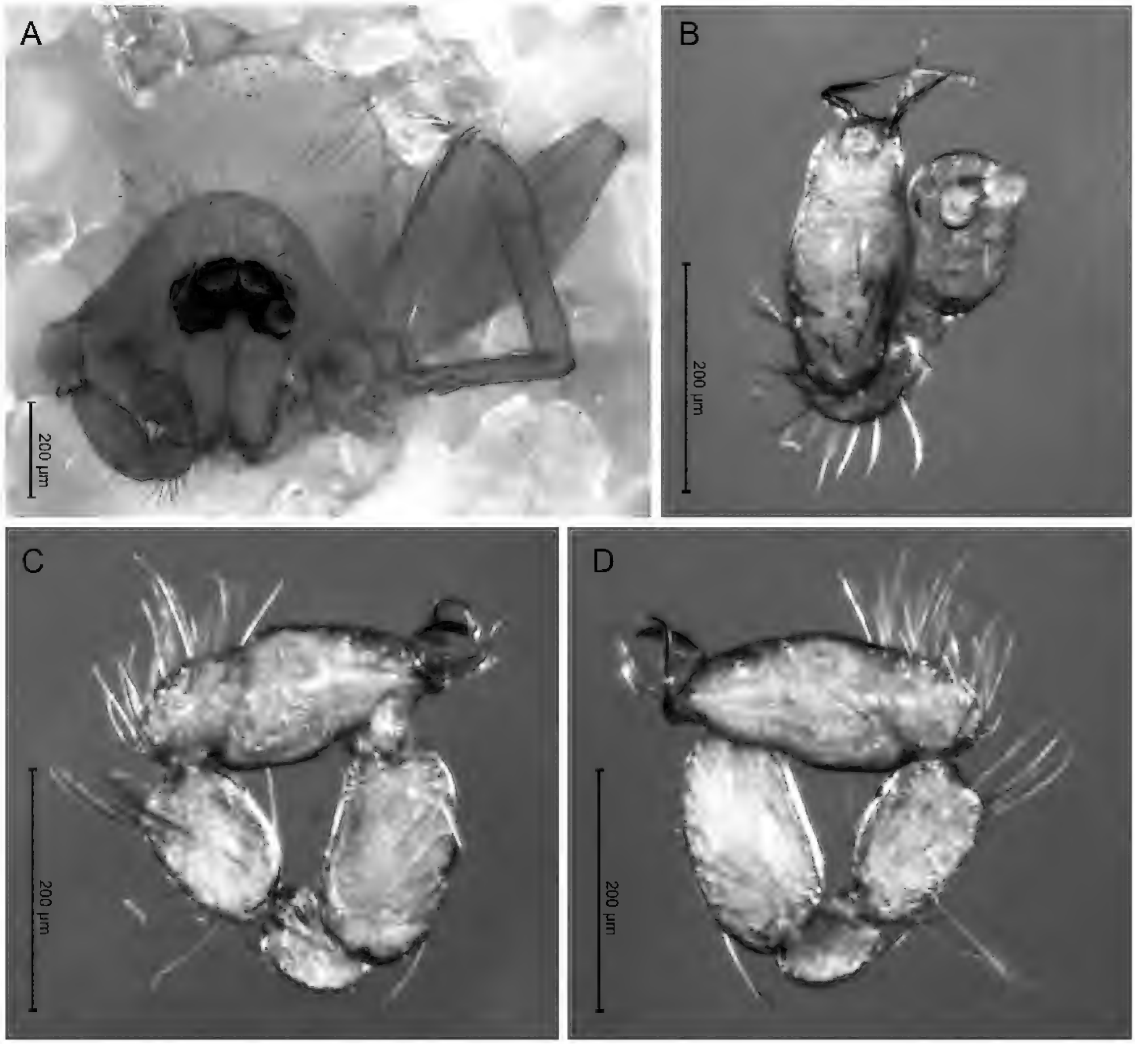


Fig. 81. *Neotrops pithecia*, new species, male PBI_OON 43168. **A.** Habitus, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

DIAGNOSIS: Males share with those of *N. platnicki* an ovoid palpal bulb and similar trajectory of the seminal duct (figs. 81B–D, 86D), but differ in the shape of the conductor and partial fusion of bulb and cymbium. Females differ from other species in the group by the elongate anterior receptacle, gradually widened distally, and a very small posterodorsal plate, which has an irregular, wrinkled anterior margin (fig. 86C).

DESCRIPTION: MALE (PBI_OON 43168). Total length 1.52. **Cephalothorax:** Carapace pale orange, ovoid in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to between 0.5 and 0.75 times its maximum width; lateral margin straight; nonmarginal pars cephalica setae absent; nonmarginal pars thoracica setae absent; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes PME largest, ALE circular, PME oval, PLE circular; posterior eye row procurved from front; ALE separated by more than their diameter, ALE-PLE touching, PME touching throughout most of their length, PLE-PME separated by less than PME radius.

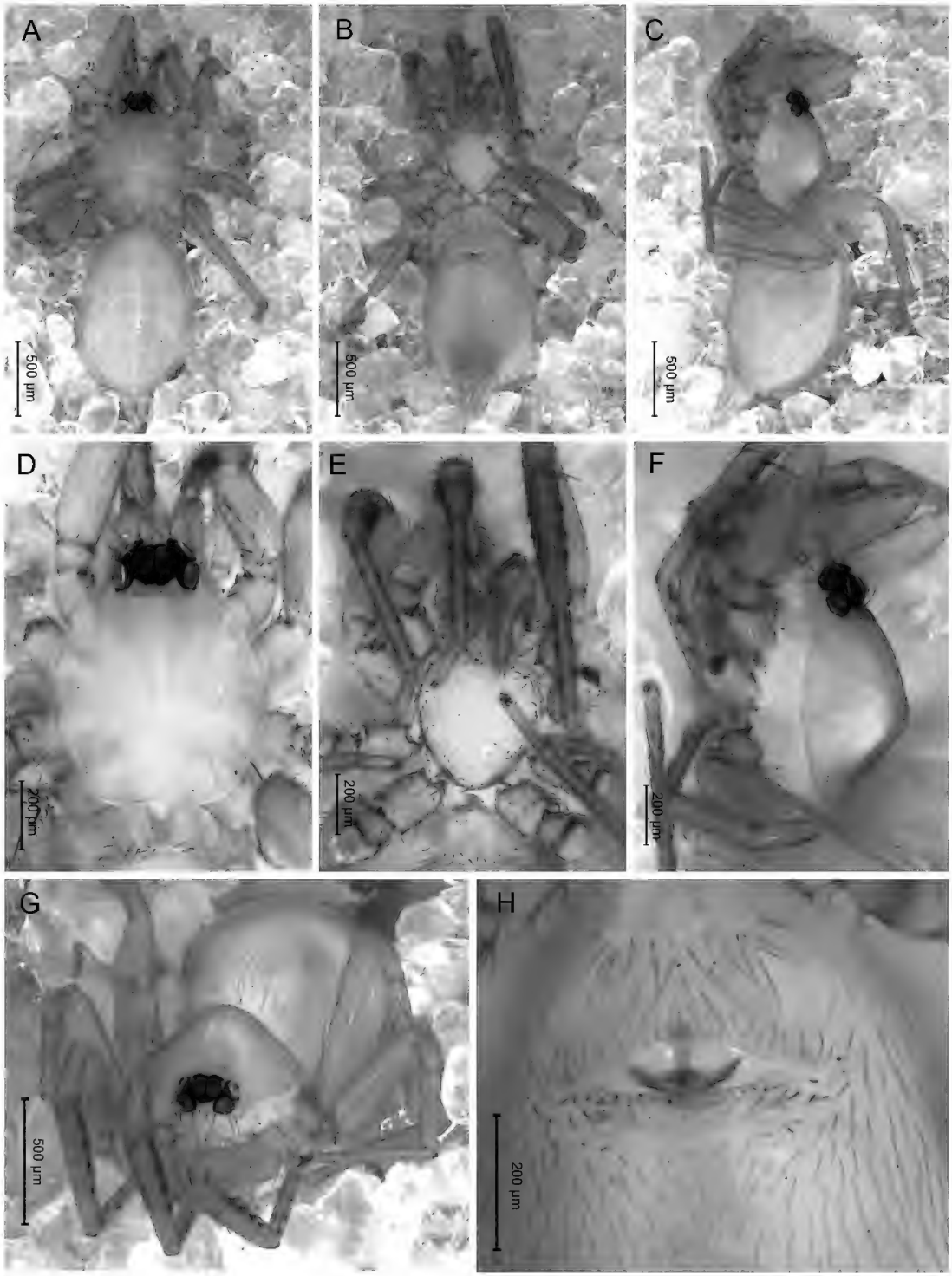
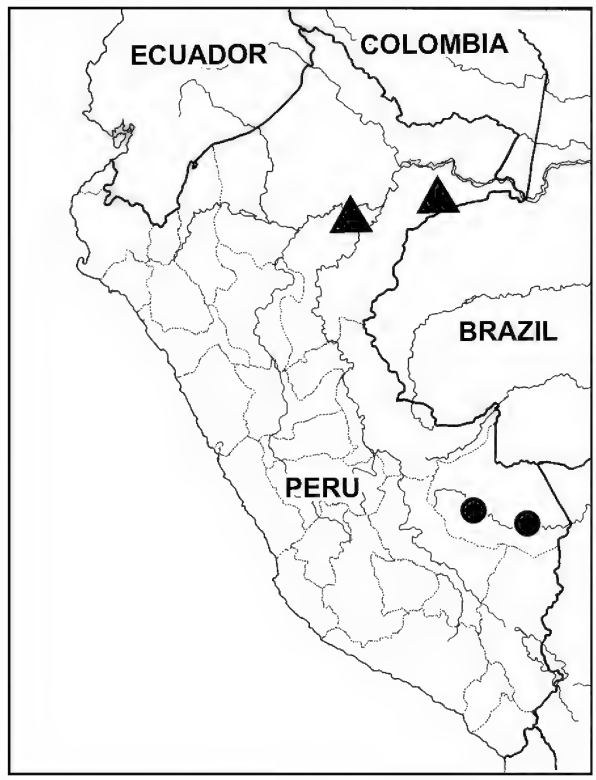


Fig. 82. *Neotrops pithecia*, new species, female PBI_OON 43168. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.



Map 8. Records of *Neotrops pithecia + silvae* (triangles) and *N. pakitza* (circles).

Sternum as long as wide, pale orange, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV; setae sparse, evenly scattered. Mouthparts: chelicerae, endites, and labium pale orange; cheliceral setae light, evenly scattered. Labium anterior margin indented at middle; with six or more setae on anterior margin. Endites distally not excavated, anteromedian tip with backward folded ridge, with anterolateral folded margins (fig. 80E). **Abdomen:** Dorsum pale white. Book lung covers elliptical. Postepigastric scutum pale orange. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:** Pale orange; femur IV thickened, much larger than femora I–III. Leg spination: leg I: femora d1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora d1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d1-1, tibiae p1-0, r1, v1ap, metatarsi p1-1; leg IV: femora d1-1-1, tibiae d1, p1-1, r1-1, v1ap, metatarsi d1-0-1, p1-1, r1-1. Trichobothria not examined. **Genitalia:** Palp proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, fused with bulb but with clearly defined seam between on the retrolateral side (fig. 81D); bulb pale orange, more than two times as long as cymbium, slender, elongated; conductor complex distally, with two prolongations, one translucent, medial, with a ventral series of spicules, and other more prolateral, sclerotized, curved; both elements basally connectd with membrane; embolus dark (fig. 86D).

Female (PBI_OON 43168). Total length 2.00. As in male except as noted. **Cephalothorax:** Carapace broadly oval in dorsal view, anteriorly narrowed to less than half their maximum width. Eyes posterior eye row straight from front; ALE separated by their radius to diameter, ALE-PLE separated by less than ALE radius. Sternum precoxal triangles present; setae dark (fig. 82E). Labium elongated hexagon. Palp spines absent. **Abdomen:** Dorsum white. Book lung covers

round. Postepigastric area setae dark, needlelike. **Legs:** Patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora d1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora d1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d1-1-1, tibiae p1-1, v1ap (very tiny), metatarsi p1-1, r0-1, v2subap; leg IV: femora d1-1-1; tibiae d1, p1-1, r1-1, v1-0-ap (very tiny), metatarsi d1, p0-1-1, r1-0-1, v1-2ap. **Genitalia:** Dorsal view: anterior receptacle elongated, gradually widened distally, apical part rounded; posterodorsal plate shorter than anterior receptacle, with irregular, wrinkled anterior margin; uterus externus opening broad, transverse (fig. 86C).

Other Material Examined: **PERU: Loreto:** Pithecia, −5.18333°, −72.70000°, May 01, 1990, to June 01, 1990, T. Erwin, 3♀ (MUSM PBI_OON 43063).

Distribution: Loreto (Peru), where is sympatric with *N. silvae* (map 8).

Neotrops silvae, new species
Figures 83–85, 86E–F; map 8

Types: Male holotype from Peru: Loreto: Río Samiria, −5.11666°, −75.46666°, May 01, 1990, to June 01, 1990, T. Erwin, D. Silva (MUSM PBI_OON 43316); 3♀ and 3♂ paratypes (MUSM PBI_OON 43316) with same data. Deposited in MUSM.

Etymology: The specific epithet is a patronymic of Diana Silva, one of the collectors of the type specimens.

Diagnosis: *N. silvae* males differ from the other two species of the *platnicki* group in having a more elongated bulb, and also by the different shape of the conductor (figs. 84B–D, 86F); females by the relatively small anterior receptacle, with a transverse ovoid distal part (fig. 86E).

Description: Male (PBI_OON 43316). Total length 1.66. **Cephalothorax:** Carapace pale orange, ovoid in dorsal view, pars cephalica slightly elevated in lateral view, anteriorly narrowed to between 0.5 and 0.75 times its maximum width; lateral margin straight; nonmarginal pars cephalica setae dark, needlelike, scattered; nonmarginal pars thoracica setae dark, needlelike; marginal setae absent. Clypeus setae absent. Eyes all subequal, ALE circular, PME oval, PLE oval; posterior eye row procurved from front; ALE separated by more than their diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum as long as wide, pale orange, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV; setae sparse, evenly scattered (fig. 83E). Mouthparts: chelicerae, endites, and labium pale orange; cheliceral setae light, evenly scattered. Labium anterior margin indented at middle; with six or more setae on anterior margin. Endites distally not excavated, anteromedian tip with backward folded ridge and laterally directed pointed projections (fig. 83E). **Abdomen:** Dorsum white. Book lung covers elliptical. Postepigastric scutum pale orange. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:** Pale orange; femur IV thickened, much larger than femora I–III. Leg spination: leg I: femora d1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2-0; leg II: tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2-0; leg III: femora d1-1, tibiae p1-1, r1-1, metatarsi d1subap, p1-1, r1-1; leg IV: femora d1-1-1, tibiae d1, p1-1, r1-1, v1-1ap, metatarsi d1subap, p1-1, r1-1, v1-2ap. Trichobothria not examined. **Genitalia:** Palp proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, partially fused to the bulb; bulb pale orange, more than two times as long as cymbium, slender, elongated. Embolus dark, long, strongly curved; conductor complex, with two prolongations, one medial, translucent, distally expanded, and other more sclerotized, thin and curved at its base (figs. 84B–D, 86F).

Female (PBI_OON 43316). Total length 1.98. As in male except as noted. **Cephalothorax:** Sternum precoxal triangles present; setae dark. Labium elongated hexagon. Palp spines absent. **Abdomen:** Postepigastric area setae dark, needlelike. **Legs:** Patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora d1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-0; leg II: femora d1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-0; leg III: femora d1-1-1, tibiae p1-1, r1-1, v1-1ap, metatarsi p1-1, r1-1, v1-2ap; leg IV: femora

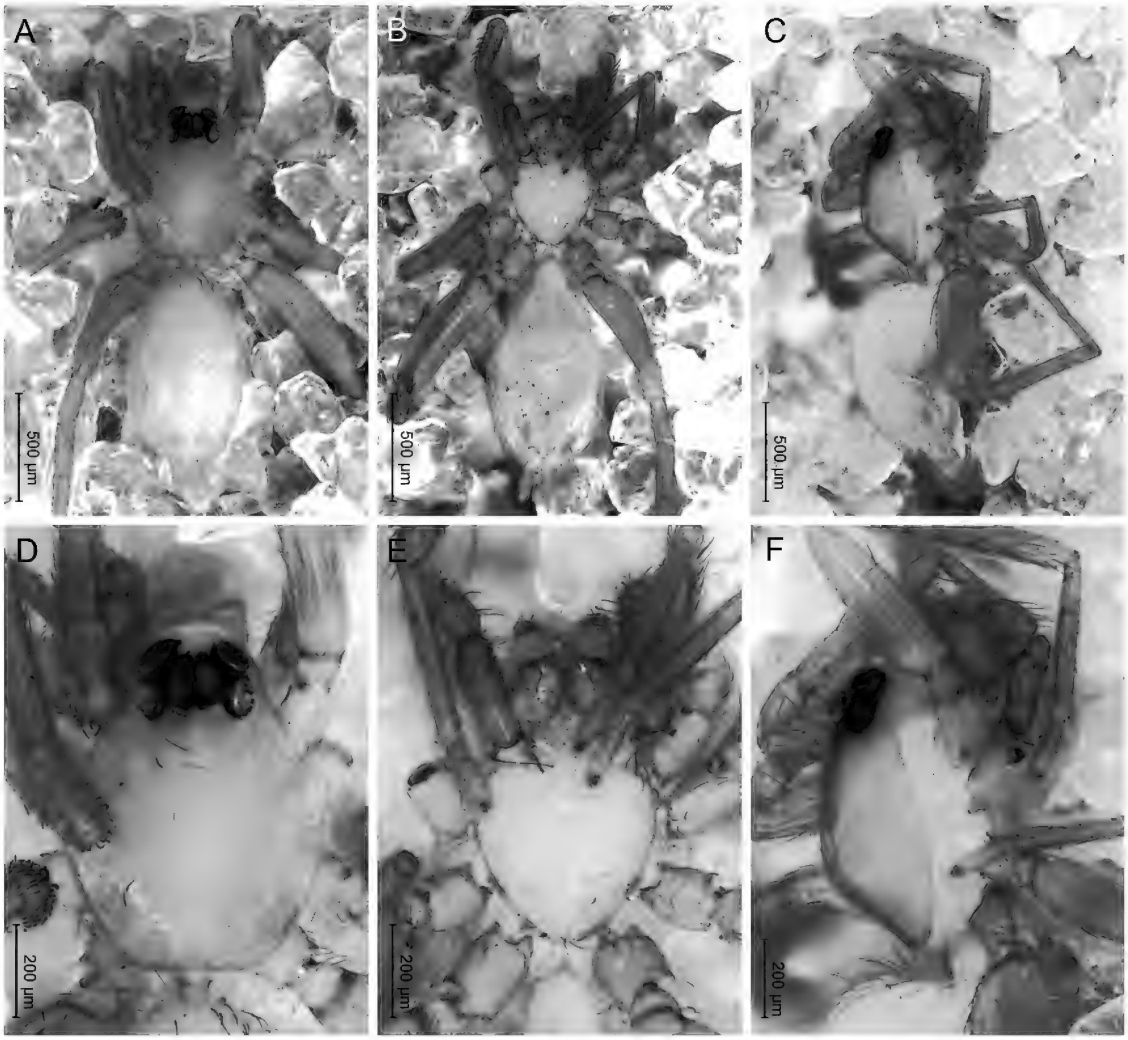


Fig. 83. *Neotrops silvae*, new species, male PBI_OON 43316. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

d1-1-1, tibiae d1, p1-1, r1-1, v1-1ap; metatarsi p1-1, r1-1, v1-2ap. **Genitalia:** Anterior receptacle relatively short (half of posterodorsal plate length), with stalk gradually widened distally and with transverse ovoid apex, with small vesicle-shaped element at base (figs. 85H, 86E).

OTHER MATERIAL EXAMINED: **PERU: Loreto:** Pithecia, −5.18333°, −72.70000°, May 23, 1990, to May 31, 1990, T. Erwin, D. Silva, 1♀ (MUSM PBI_OON 43058); May 01, 1990, to June 01, 1990, T. Erwin, D. Silva, 1♀, 1♂ (MUSM PBI_OON 43153); Río Samiria, −5.11666°, −75.46666°, May 01, 1990, to June 01, 1990, T. Erwin, D. Silva, 3♀ (MUSM PBI_OON 43157).

DISTRIBUTION: Loreto (Peru), where is sympatric with *N. pithecia* (map 8).

NOTE: The male genitalia of this species resemble in some way to those of the *poguazu* group, especially by the elongated bulb; however, it is here tentatively placed in the

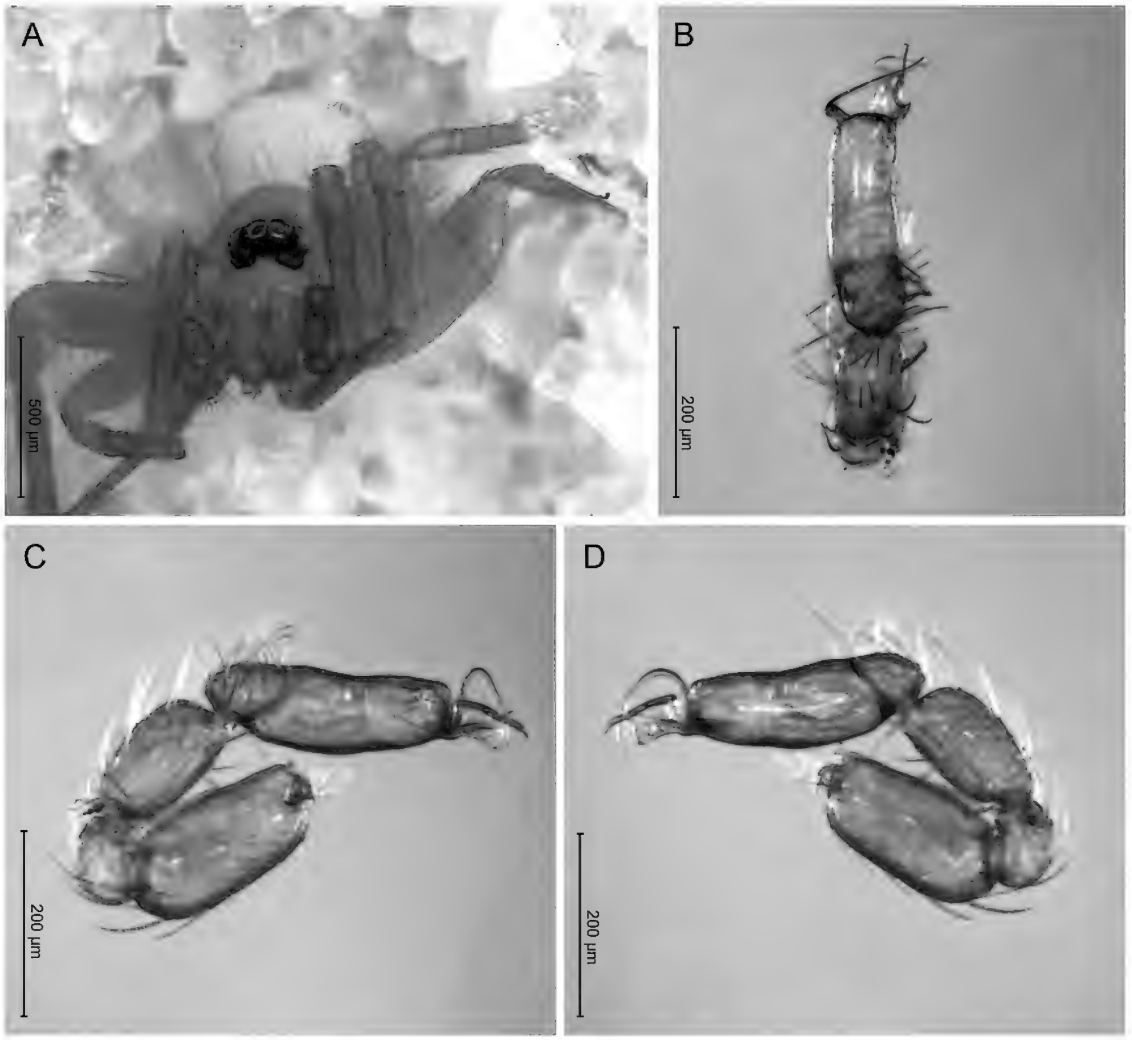


Fig. 84. *Neotrops silvae*, new species, male PBI_OON 43316. **A.** Habitus, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

platnicki group by the pattern of spination in legs I, the partial fusion of cymbium and bulb, complex conductor, and by the small vesicle at the base of the anterior receptacle in the female genitalia (as in *N. platnicki*).

UNPLACED SPECIES

Data for the following nine species are still insufficient to assign to species groups. However, the pairs *N. donaldi–N. waorani* and *N. caparu–N. kopuchianae* are very similar in morphology, hence they are most likely sister species.

Neotrops donaldi (Chickering, 1951), new combination
Figures 87–89, 99A–B; map 9

Oonops donaldi Chickering, 1951a: 226, figs. 14–16. Male holotype from Panama: Colón: Canal Zone, Fort Davis, 26 m, 9.28555°, −79.90750°, Aug. 04, 1936, A. Chickering (MCZ 21113 PBI_OON 36849); male paratype from El Valle, July 01, 1936, A. Chickering (MCZ 66753 PBI_OON 36842). Deposited in MCZ, examined.

DIAGNOSIS: *N. donaldi* males are very similar to those of *N. waorani* by the general palpal morphology, but differ in having the

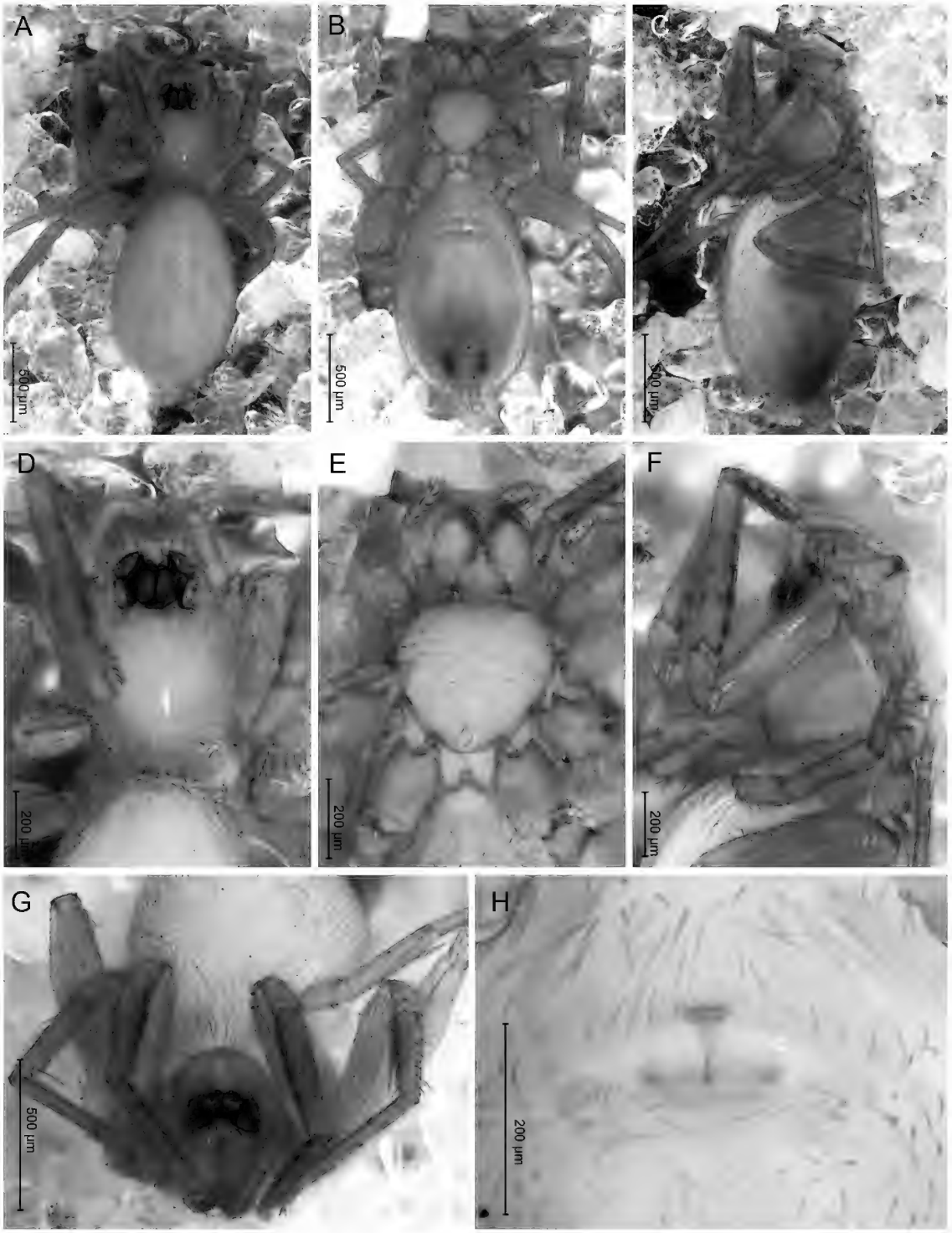


Fig. 85. *Neotrops silvae*, new species, female PBI_OON 43157. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

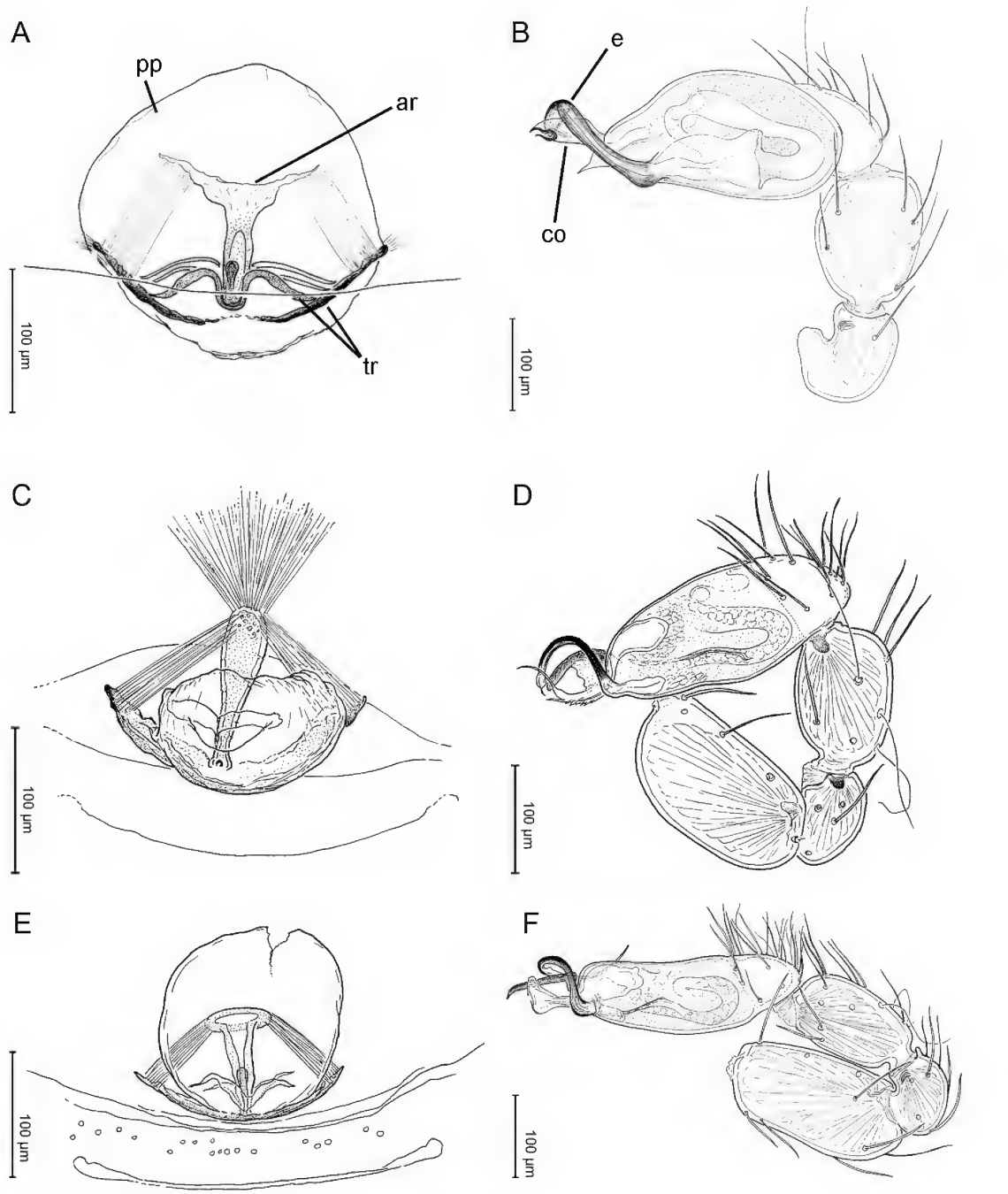


Fig. 86. *Neotrops* spp. genitalia, cleared. **A–B.** *Neotrops platnicki*, new species. **C–D**, *N. pithecia,* new species. **E–F**, *N. silvae,* new species. **A.** Internal female genitalia, ventral view (PBI_OON 30620). **B.** Male palp, retrolateral view (PBI_OON 30567). **C.** Internal female genitalia, dorsal view (PBI_OON 43168). **D.** Male palp, retrolateral view (PBI_OON 43168). **E.** Internal female genitalia, dorsal view (PBI_OON 43157). **F.** Male palp, retrolateral view (PBI_OON 43316). Abbreviations: **ar,** anterior receptacle; **co,** conductor; **e,** embolus; **pp,** posterodorsal plate; **tr,** transverse ridges.

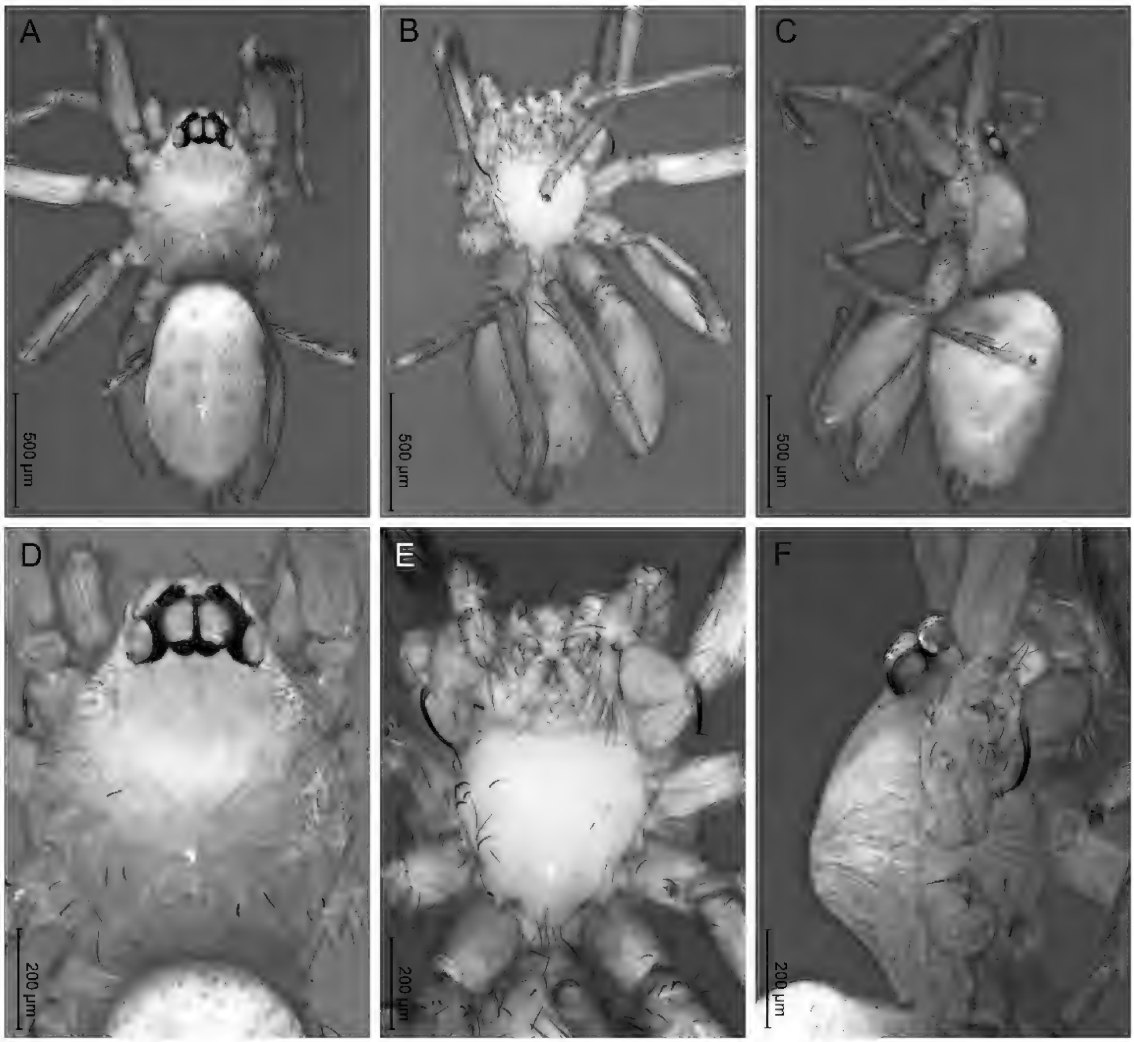


Fig. 87. *Neotrops donaldi* (Chickering), male PBI_OON 42030. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

embolar tip more strongly bent and the bulb less elongated, with a nearly rhomboidal outline (figs. 88C–D, 99B). Females differ by the long anterior receptacle with antero-lateral, posteriorly directed projections, resembling an anchor (figs. 89H, 99A). Both sexes also differ by having strong macrosetae on femora I–II (figs. 88A, 89G).

DESCRIPTION: MALE (PBI_OON 42030). Total length 1.66. **Cephalothorax:** Carapace yellow, broadly oval in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to less than half their maximum width; lateral margin straight; nonmarginal pars cephalica setae absent (broken off as the bases are present); nonmarginal pars thoracica setae dark, needlelike; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes all subequal, ALE circular, PME circular, PLE oval; posterior eye row procurved from front; ALE separated by more than their diameter, ALE-PLE touching, PME touching throughout most of their length, PLE-PME separat-

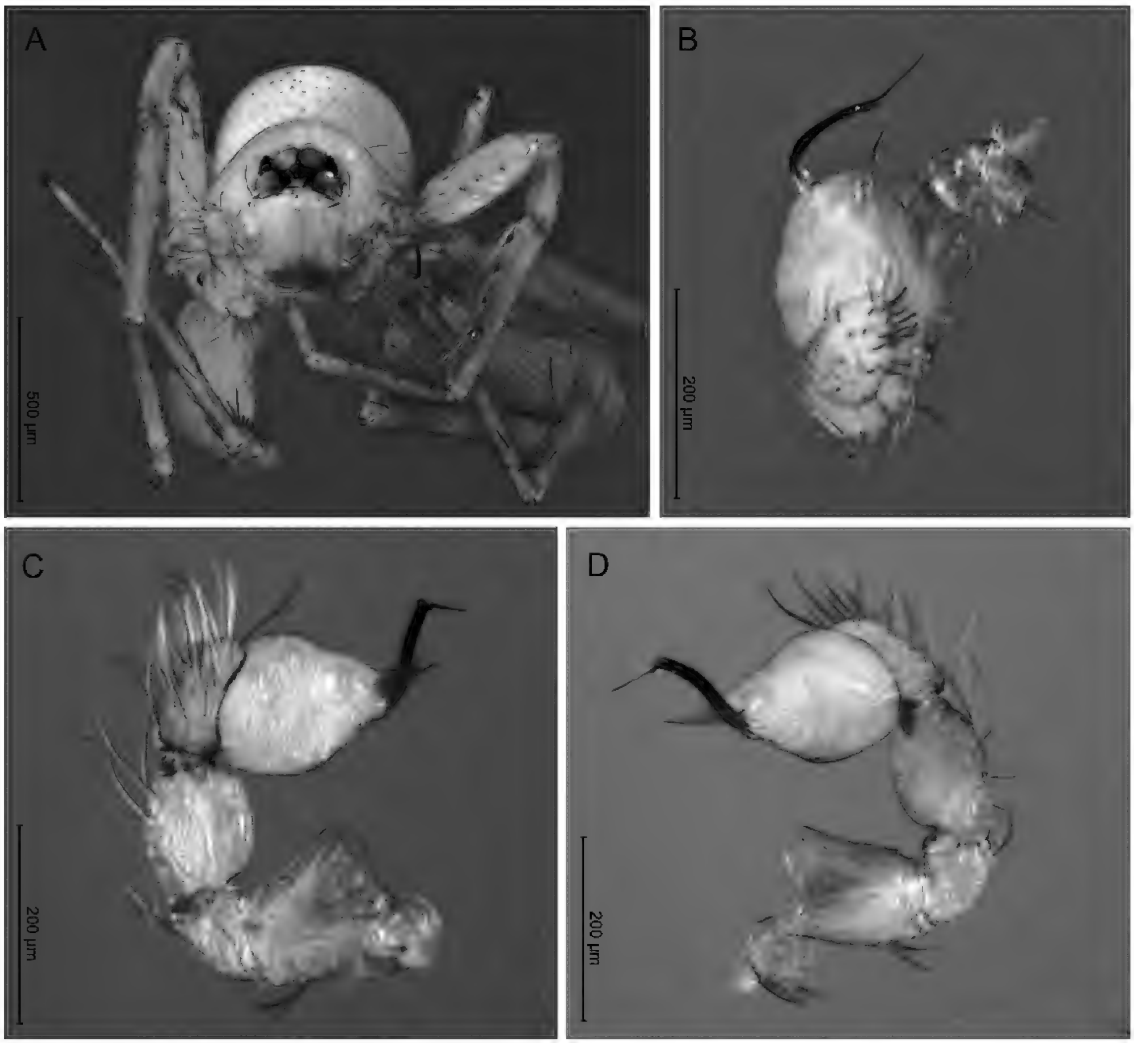


Fig. 88. *Neotrops donaldi* (Chickering), male PBI_OON 42030. **A.** Habitus, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

ed by less than PME radius. Sternum longer than wide, yellowish white, anterior margin unmodified; setae sparse, evenly scattered (fig. 87E). Mouthparts: chelicerae, endites, and labium pale orange; cheliceral setae dark, densest medially. Endites distally not excavated, with an anteromedian small pointed structure (fig. 87E). **Abdomen:** Dorsum white. Book lung covers elliptical. Postepigastric scutum pale orange. Spinneret scutum absent. Dorsum setae absent, setae lost (its bases remain). Colulus represented only by setae. **Legs:** Pale orange; femur IV thickened, much larger than femora I–III (fig. 87C). Leg spination: leg I: femora d1-1-1, pv0-0-1-1-1, rv0-0-1-1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora d1-1-1, pv0-0-1-1-1, rv0-0-1-1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d1-1-1-1, tibiae d1, p1-1, r1-1, v1-2ap, metatarsi d1-0-1, p1-1, r1-1, v1-2ap; leg IV: femora d1-1-1-1, tibiae d1, p1-1, r1-1, v1-2ap, metatarsi d1-0-1, p1-1, r1-0-1, v1-2ap. Trichobothria not examined. **Genitalia:** Palp proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, not fused with bulb; bulb pale orange, 1 to 1.5 times as long as

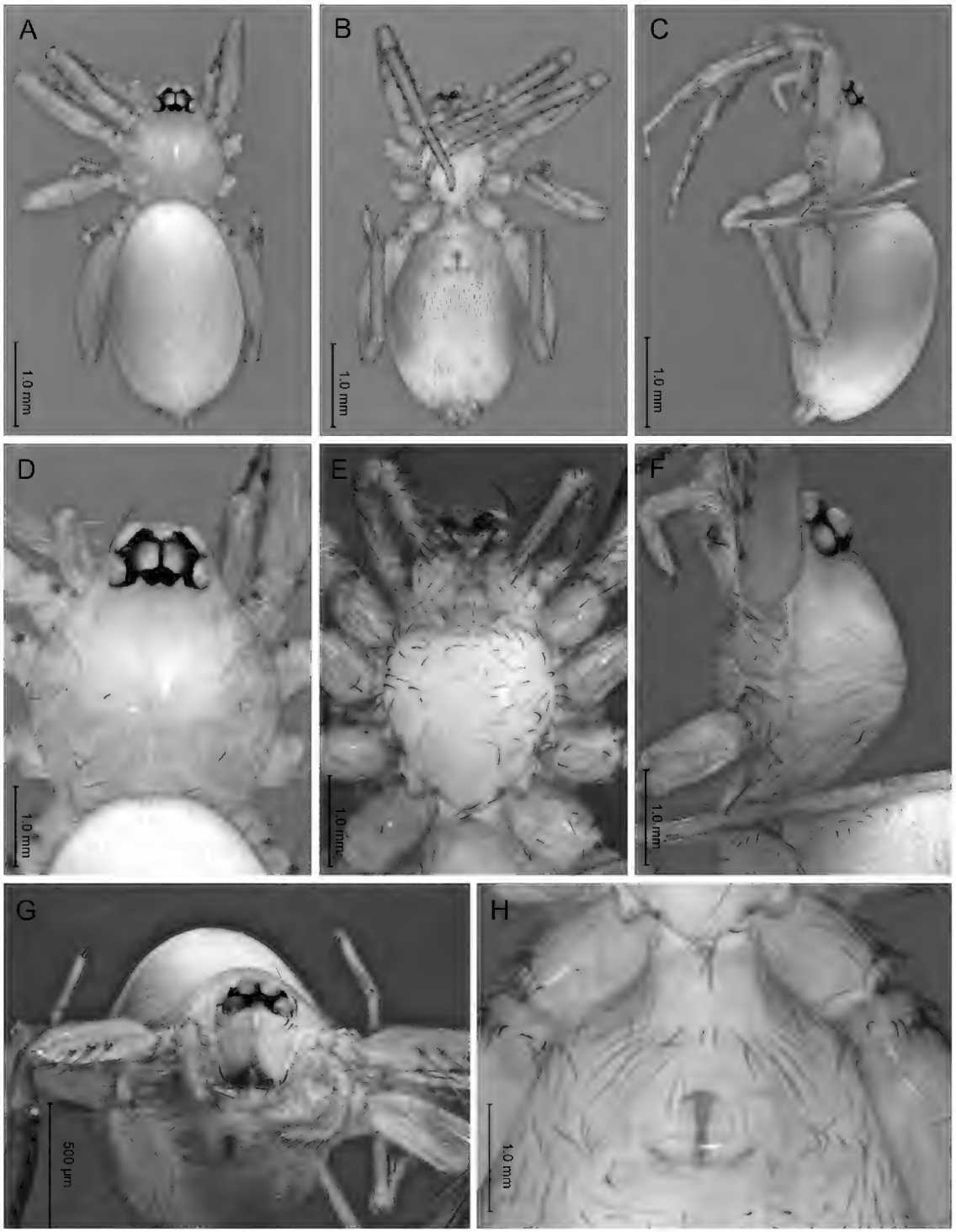
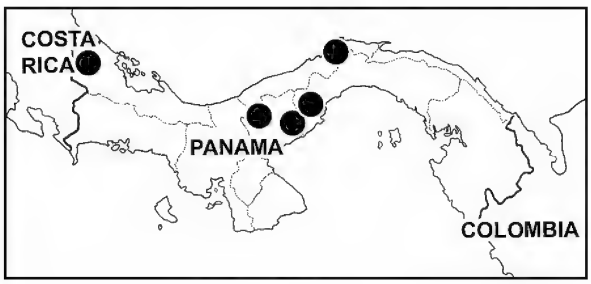


Fig. 89. *Neotrops donaldi* (Chickering), female PBI_OON 42034. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.



Map 9. Records of *Neotrops donaldi* (circles).

cymbium, stout, tapering apically, distal part with conductor short, pointed, knife shaped; embolus dark, abruptly bent to ventral in the distal third (figs. 88B–D, 99B).

Female (PBI_OON 42034). Total length 2.08. As in male except as noted. **Cephalothorax:** Carapace nonmarginal pars cephalica setae probably broken off (the bases remain). Sternum precoxal triangles present; setae dark. Labium elongated hexagon. Palp spines absent. **Abdomen:** Dorsum pale white. Dorsum setae setae broken off (the bases remain). Postepigastric area setae dark, needlelike. **Legs:** Patella plus tibia I nearly as long as carapace. Femur IV enlarged, but not as much as in male (fig. 89C). Leg spination: leg I: femora d1-1-1, pv0-0-1-1-1, rv0-0-1-1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora d1-1-1, pv0-0-1-1-1, rv0-0-1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d1-1-1-1, tibiae r1-1, d1, p1-1, v1-2ap, metatarsi d1-1, p1-1, r1-1, v1-2ap; leg IV: femora d1-1-1-1, tibiae d1-0, p1-1, r1-1, v1-2ap, metatarsi d1-0-1, p1-1, r1-0-1, v1-2ap. **Genitalia:** Anterior receptacle anchor shaped (figs. 89H, 99A).

Other Material Examined: **PANAMA: Chiriquí:** P. Inter. La Amistad, Cerro Picacho, 1 hectare PANCODING Inventory, 2299 m, 8.89027°, −82.61861°, June 12, 2008, to June 17, 2008, M. Arnedo, L. Benavides, G. Hormiga, F. Labarque, M. Ramírez, 1♀ (MIUP PBI_OON 42045), 1♀ (MIUP PBI_OON 42048), 1♂ (MIUP PBI_OON 42051), 1♀ (MACN-Ar 27082 PBI_OON 42052), 1♂ (MIUP PBI_OON 42061). **Coclé:** P. Nac. G.D. Omar Torrijos Herrera, El Cope, 1 hectare PANCODING Inventory, 760 m, 8.66805°, −80.59250°, June 04, 2008, to June 09, 2008, M. Arnedo, L. Benavides, G. Hormiga, F. Labarque, M. Ramírez, 1♂ (GWU PBI_OON 42029), 1♂ (MACN-Ar 27077 PBI_OON 42030), 1♂ (GWU PBI_OON 42031), 1♂ (MACN-Ar 27079 PBI_OON 42032), 1♀ (MZBS PBI_OON 42033), 1♀ (MACN-Ar 27076 PBI_OON 42034), 1♂ (MIUP PBI_OON 42035), 1♀ (MZBS PBI_OON 42037), 1♀ (MZBS PBI_OON 42043), 1♀ (MACN-Ar 27078 PBI_OON 42044), 1♂ (MZBS PBI_OON 42047), 1♂ (MIUP PBI_OON 42050), 1♀ (GWU PBI_OON 42053), 1♂ (MZBS PBI_OON 42054), 1♂ (MACN-Ar 27081 PBI_OON 42055), 1♂ (GWU PBI_OON 42056), 1♀ (MZBS PBI_OON 42059), 1♂ (MZBS PBI_OON 42060), 1♂ (MZBS PBI_OON 42062), 1♀ (GWU PBI_OON 42063). **Panamá:** P. Nac. Altos de Campana, 1 hectare PANCODING Inventory, 895 m, 8.68333°, −79.92972°, June 14, 2007, to June 17, 2007, M. Arnedo, L. Benavides, G. Hormiga, F. Labarque, M. Ramírez, 1♀ (MIUP PBI_OON 42049).

Distribution: Only known from Panama (map 9).

Natural History: Unknown.

Neotrops waorani, new species
Figures 90–96, 99C–D; map 7

Types: Male holotype, three male paratypes and three female paratypes from Ecuador: Orellana: 1 km S Onkone Gare Camp, Reserva Etnica Waorani, 216 m, −0.65715°, −76.45300°, Feb. 07, 1996, T. Erwin et al. (USNM PBI_OON 15164). Deposited in USNM.

Etymology: The specific name is a noun in apposition, referring to the Waorani people, the indigenous nation that live in the region inhabited by this species.

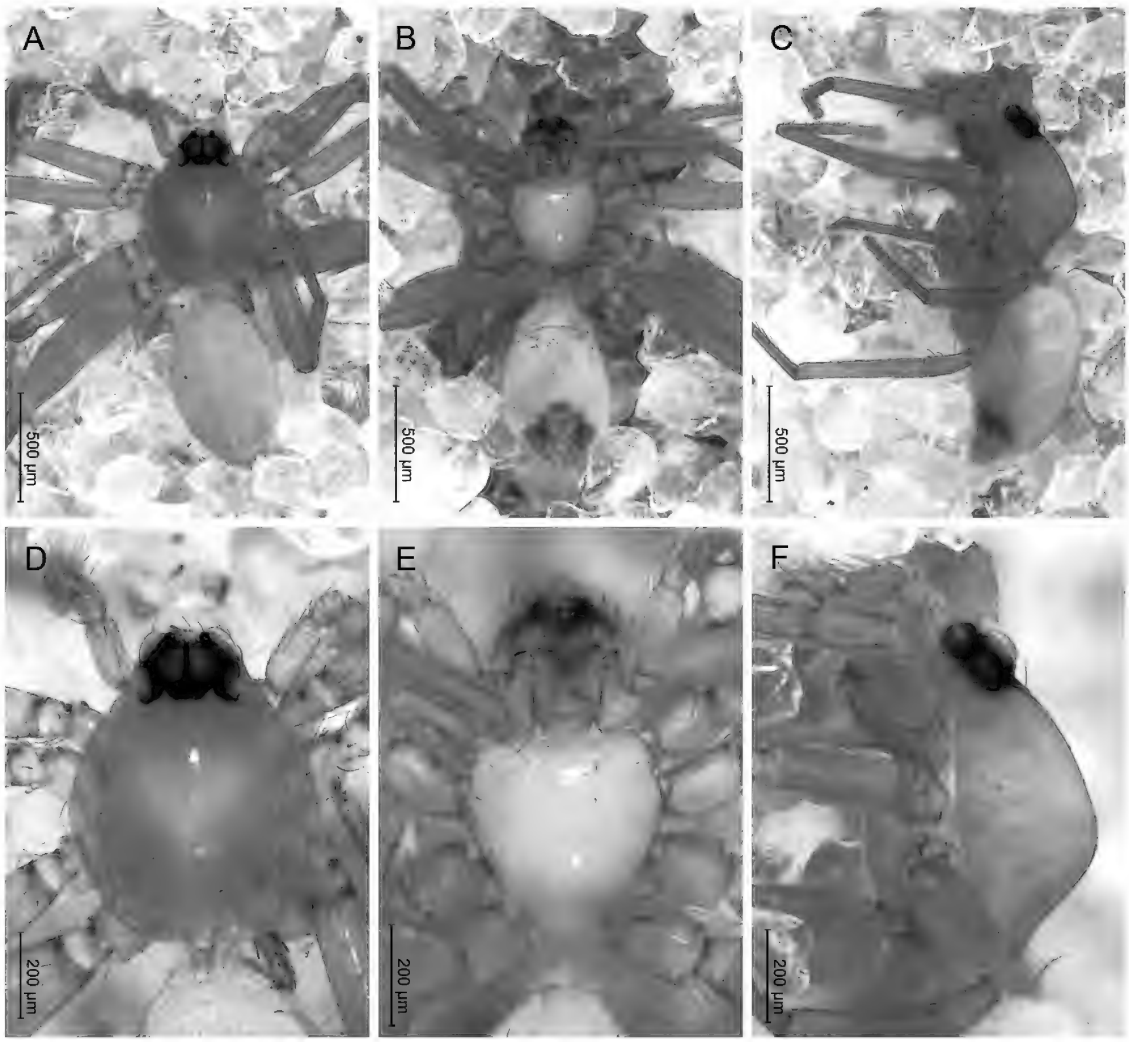


Fig. 90. *Neotrops waorani*, new species, male PBI_OON 1564. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

DIAGNOSIS: *N. waorani* males are very similar to those of *N. donaldi* in general palpal morphology, but differ in having the embolar tip gently curved, and the bulb slightly elongated (figs. 91B–D, 99D). Females are recognized by the short, cup-shaped anterior receptacle with short antero-lateral projections (fig. 99C). Both sexes also differ in lacking strong macrosetae on the femora I–II (figs. 91A, 92G).

DESCRIPTION: MALE (holotype, PBI_OON 15164). Total length 1.52. **Cephalothorax:** Carapace yellow-brown, ovoid in dorsal view, pars cephalica strongly elevated in lateral view (fig. 93E), anteriorly narrowed to between 0.5 and 0.75 times its maximum width; lateral margin straight; nonmarginal pars cephalica setae dark, needlelike, in U-shaped row; nonmarginal pars thoracica setae dark, needlelike; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes (fig. 93C, E, F) all subequal, all eyes circular; posterior eye row straight from front; ALE separated by their radius to diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most

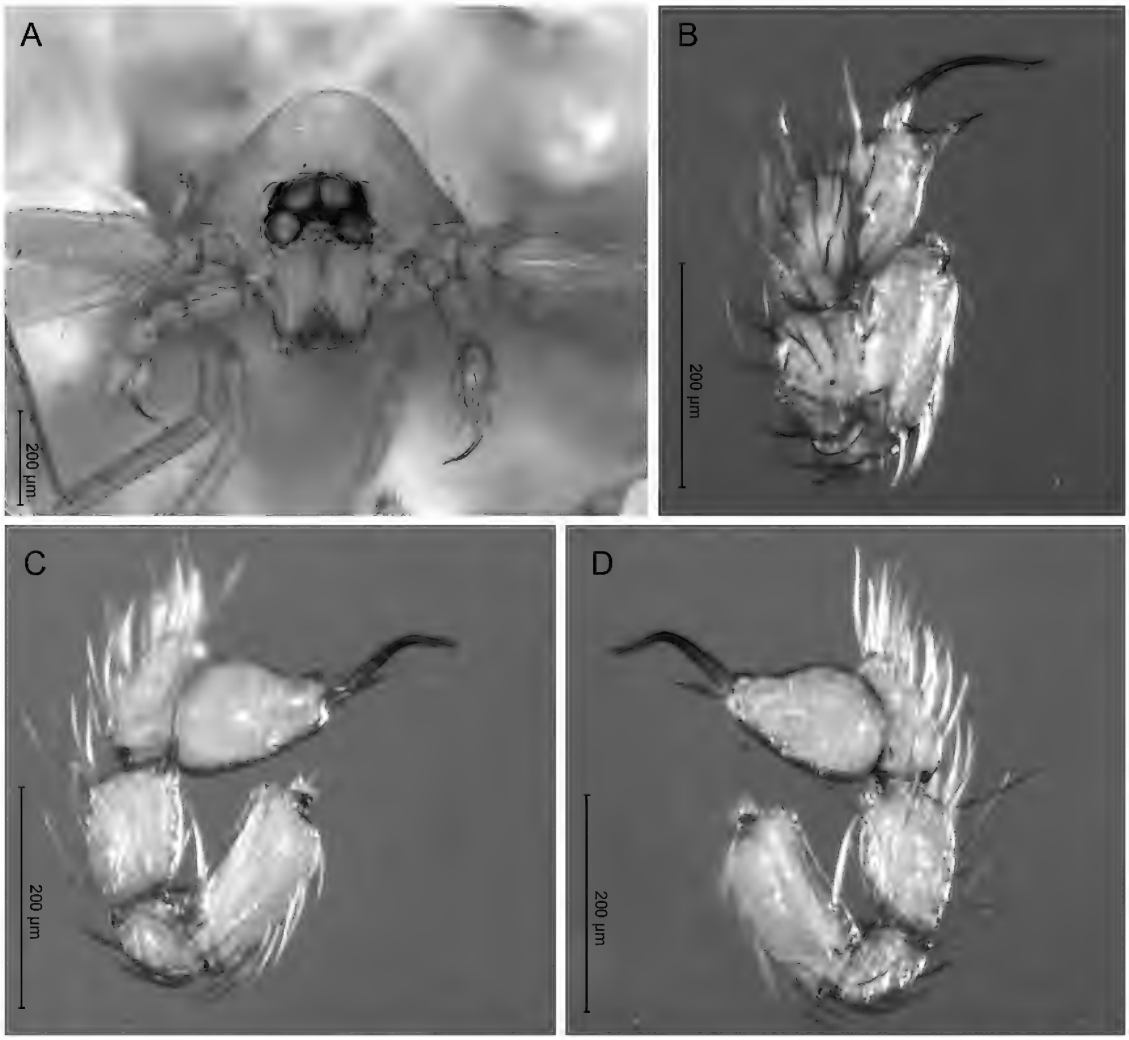


Fig. 91. *Neotrops waorani*, new species, male. **A.** Carapace, anterior view (PBI_OON 15164). **B–D.** Palp (PBI_OON 30837). **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

of their length, PLE-PME separated by less than PME radius. Sternum longer than wide, yellow, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV; setae sparse, densest laterally. Mouthparts: chelicerae, endites, and labium pale orange; cheliceral setae light, evenly scattered. Labium anterior margin indented at middle; with six or more setae on anterior margin. Endites distally excavated, with a small, distal flattened projection (fig. 94A). **Abdomen:** Dorsum pale white. Book lung covers elliptical. Postepigastric scutum yellow. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:** Pale orange; femur IV thickened, much larger than femora I–III (fig. 90C), tibia IV specialized hairs on ventral apex present, strongly curved (fig. 95d), distally barbed specialized hairs also on tibia III (fig. 95C). Leg spination: leg I: tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d1, tibiae d1, v1-1ap, metatarsi p1-1, r1-1, v1-2ap; leg IV: femora d1, tibiae dv1-1ap, metatarsi p1-1, r1-1, v1-2ap. Trichobothria not examined. **Genitalia** (figs. 91B–D, 94, B–D, 99D): Palp proximal segments yellow;

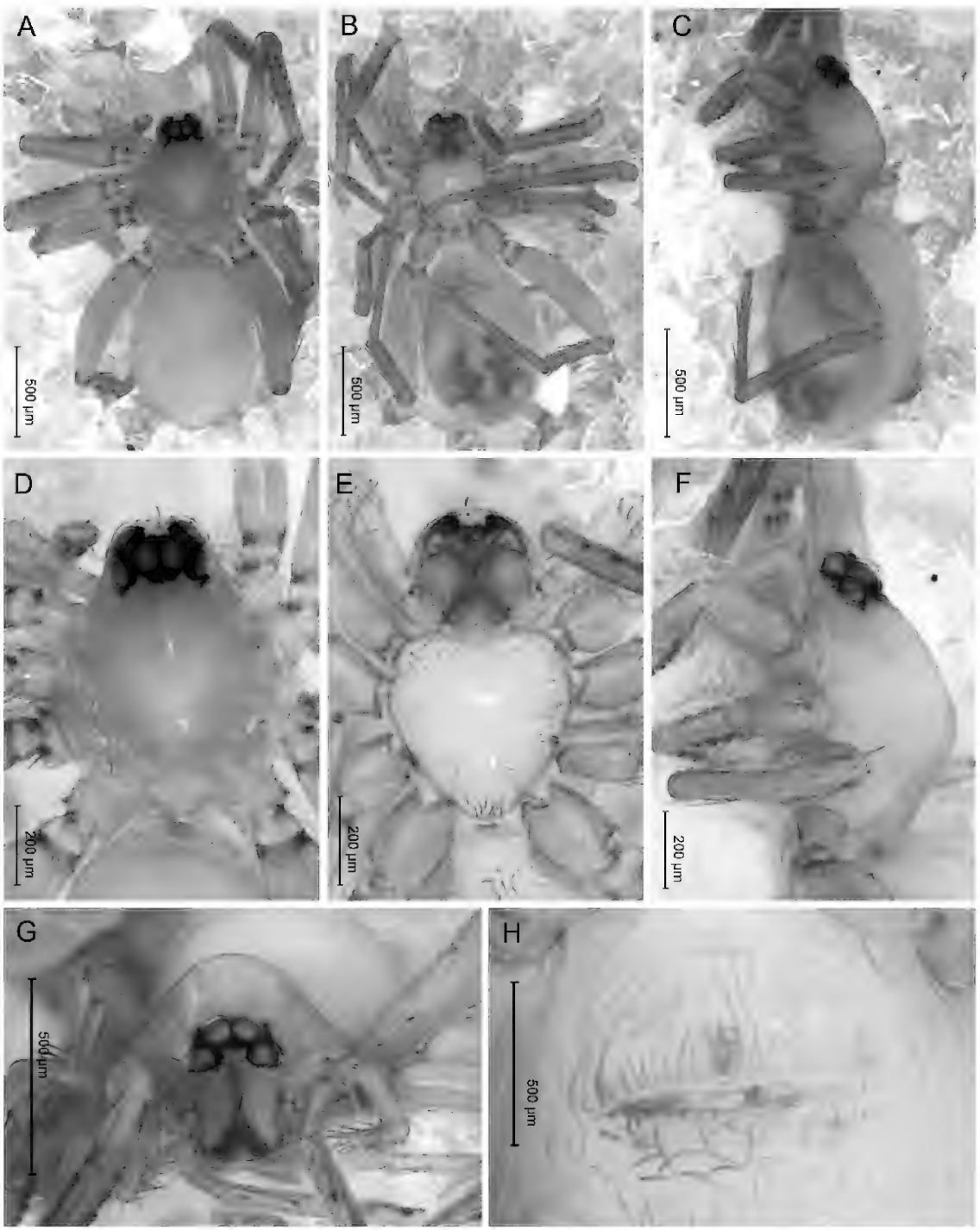


Fig. 92. *Neotrops waorani*, new species, female PBI_OON 15164. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

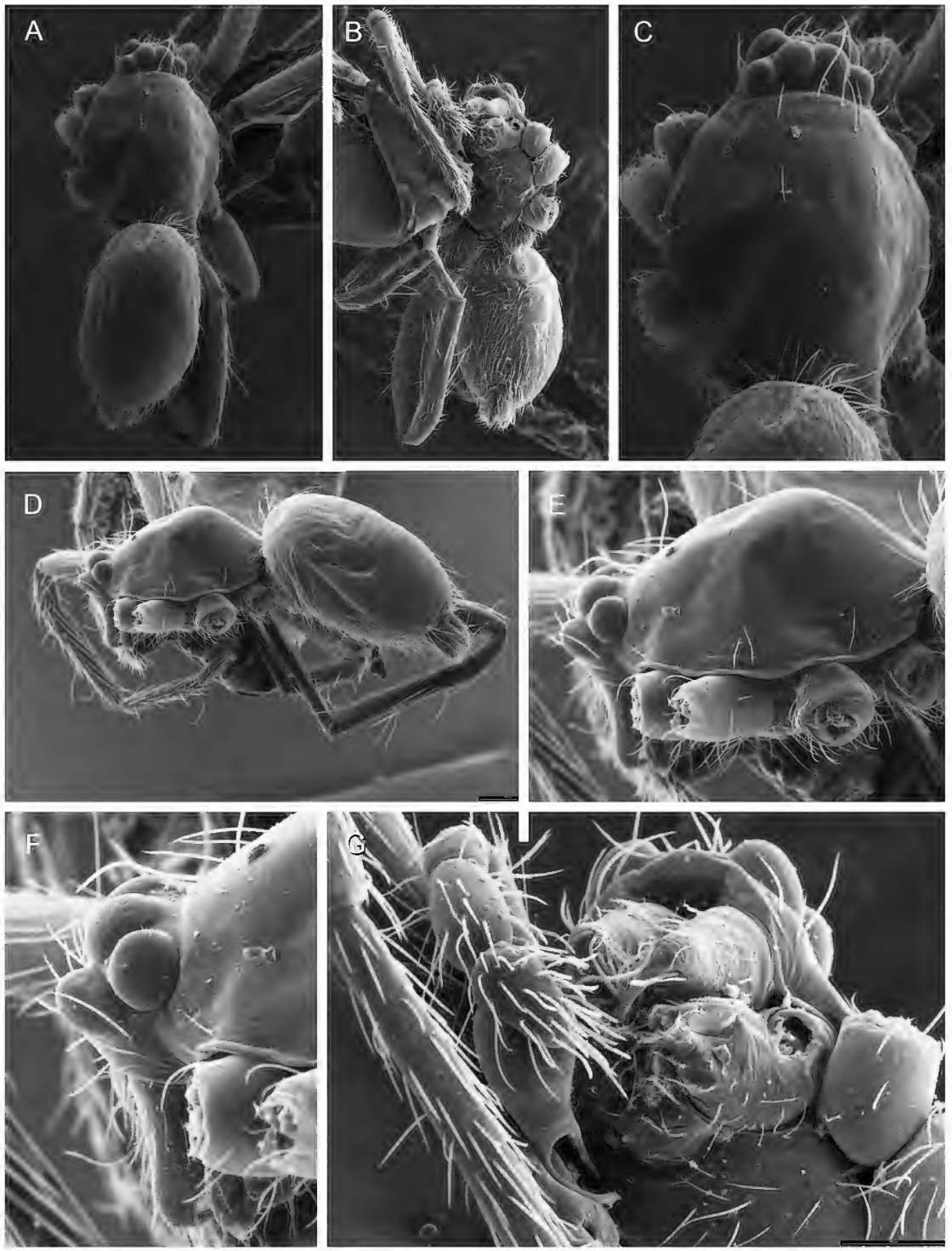


Fig. 93. *Neotrops waorani*, new species, male PBI_OON 30600. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Carapace, dorsal view. **D.** Habitus, lateral view view. **E.** Carapace, lateral view. **F.** Ocular area, lateral view. **G.** Mouthparts, ventral view.

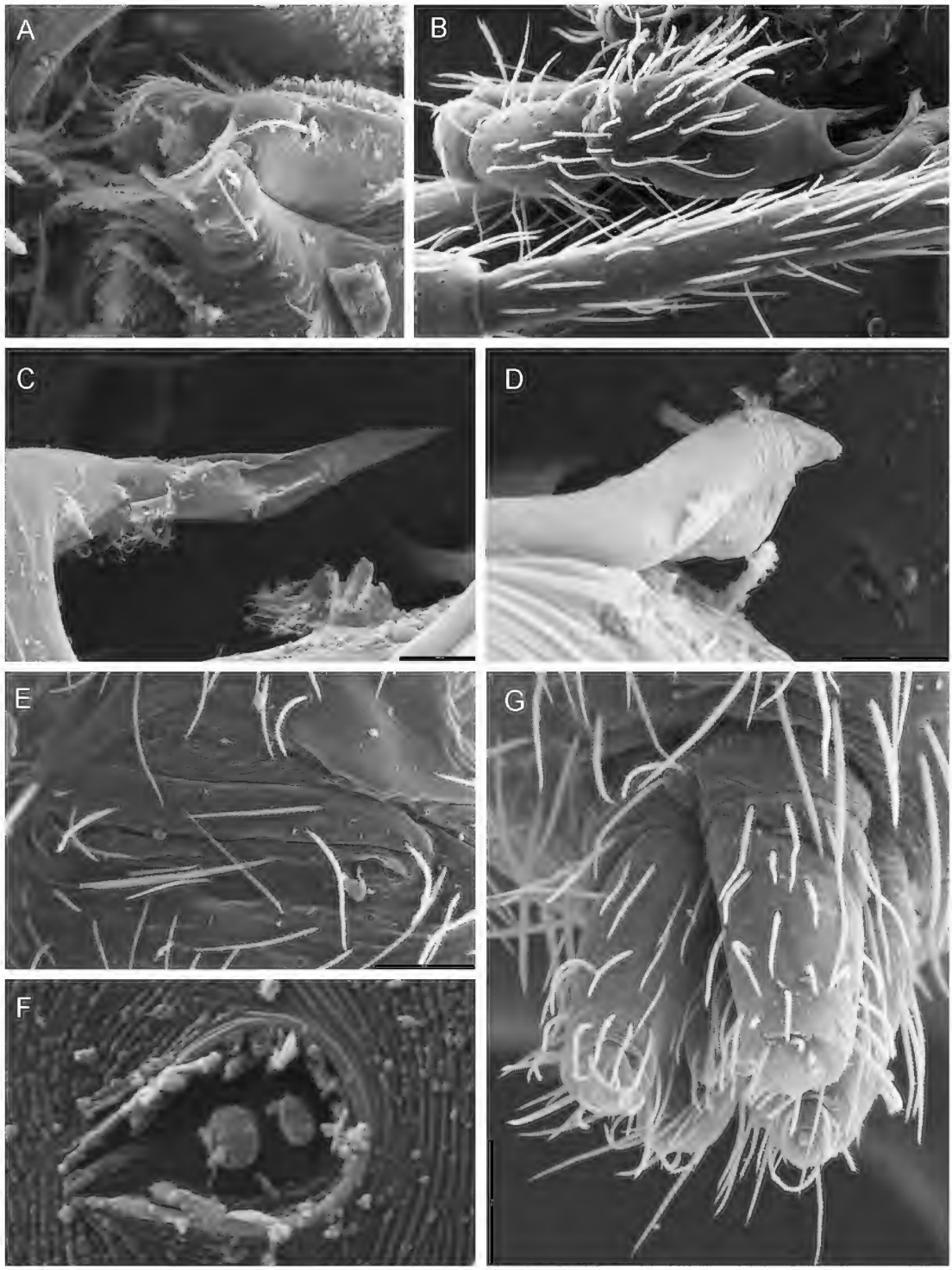


Fig. 94. *Neotrops waorani*, new species, male PBI_OON 30600. **A.** Serrula, ventral view. **B.** Palp. dorsal view. **C.** Same, detail of conductor. **D.** Same, detail of the embolus tip. **E.** Epigastrium, ventral view. **F.** Tarsal organ of palp, dorsal view. **G.** Spinnerets, ventral view.

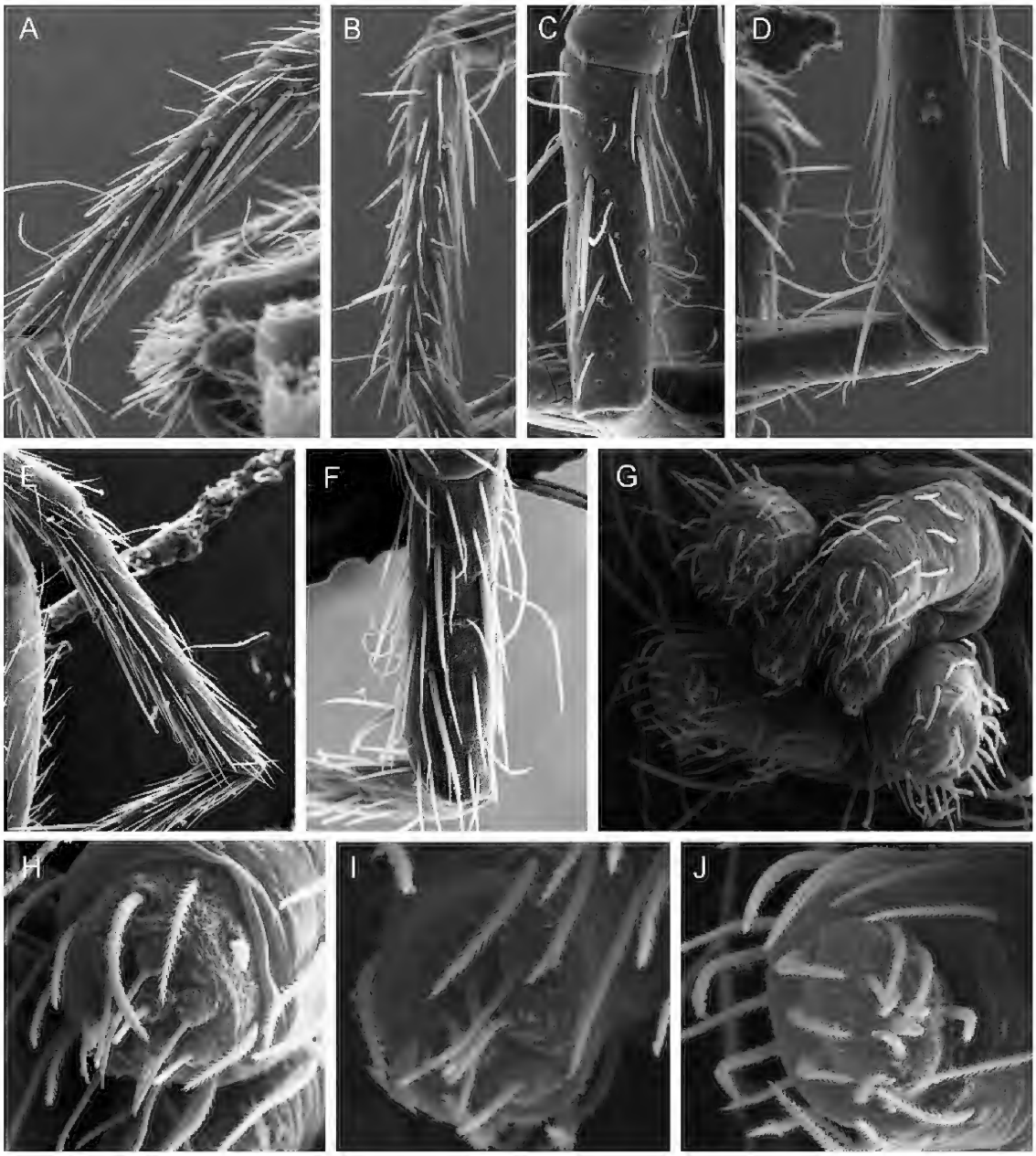


Fig. 95. *Neotrops waorani*, new species, **A–D,** male PBI_OON 30600, **E–J,** female PBI_OON 30836. **A.** Tibia I, prolateral view. **B.** Metatarsus I, prolateral view. **C.** Tibia III, dorsal view. **D.** Tibia IV, retrolateral view. **E.** Tibia IV, prolateral view. **F.** Tibia III, prolateral view. **G.** Spinnerets, ventral view. **H.** Anterior lateral spinneret. **I.** Posterior median spinneret. **J.** Posterior lateral spinneret.

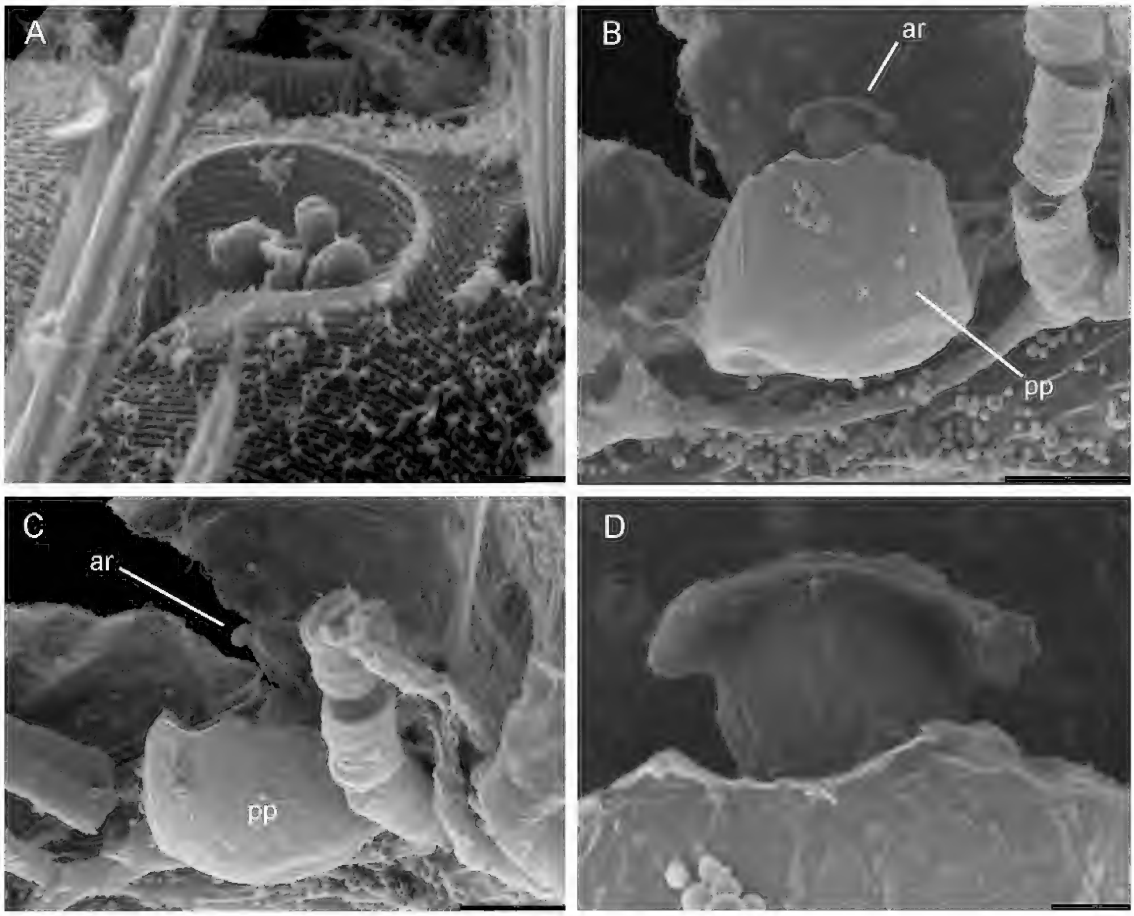


Fig. 96. *Neotrops waorani*, new species, female PBI_OON 30836. **A.** Tarsal organ, leg I. **B.** Internal female genitalia, dorsal view. **C.** Same, oblique-dorsal view. **D.** Same, detail of the anterior receptacle, dorsal view. Abbreviations: **ar,** anterior receptacle; **pp,** posterodorsal plate.

femur normal size, two or more times as long as trochanter; cymbium yellow, ovoid in dorsal view, not fused with bulb; bulb white, 1 to 1.5 times as long as cymbium, slender, tapering apically, distal part conductor small, acute and flattened, with a dorsal subapical opening (fig. 94C); embolus dark, gently curved, with a widened tip (in dorsal view, fig. 94B, D).

Female (paratype, PBI_OON 15164). Total length 1.76. As in male except as noted. **Cephalothorax:** Carapace broadly oval in dorsal view. Sternum precoxal triangles present; setae dark. Labium elongated hexagon. Palp spines absent. **Abdomen:** Postepigastric area setae dark, needlelike. Spinnerets (fig. 95G–J): ALS: with seven spigots; PMS: with six spigots; PLS: with five spigots. **Legs:** Patella plus tibia I nearly as long as carapace, ventrodistal part of tibiae III–IV with strongly curved, distally barbed specialized hairs (fig. 95E–F). Leg spination: leg I: tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d1, tibiae R1, v1-1ap, metatarsi p1-1, r1-1, v1-2ap; leg IV: femora d1, tibiae P1-1, R1-1, v1-1ap, metatarsi p1-1, r1-1, v1-2ap. **Genitalia** (figs. 92H, 96B–D, 99C): Anterior receptacle with short, narrow stalk; distal half widened, nearly rectangular, bearing lateral flattened expansions (visible through the cuticle as cuplike shape, fig. 92H); uterus externus opening narrow, longitudinal; posterior plate rounded to nearly squared,

sometimes surpassing anterior receptacle (fig. 96B–D).

OTHER MATERIAL EXAMINED: **ECUADOR: Napo:** Jatun Sacha biological station, wet forest, 410 m, −1.06597°, −77.61672°, Dec. 01, 2009, to Dec. 05, 2009, C.J. Grismado and F.M. Labarque (Niarchos Expedition), 1♂ (QCAZ PBI_OON 30561), 1♂ (MACN-AR 27123 PBI_OON 30568), 1♀ (MACN-AR 27122 PBI_OON 30836), 1♂ (MACN-AR 27124 PBI_OON 30837). **Orellana:** 1 km S Onkone Gare Camp, Reserva Etnica Waorani, 216 m, −0.65715°, −76.45300°, Oct. 08, 1995, T. Erwin et al., 1♀ (USNM PBI_OON 1871), 3♀ (USNM PBI_OON 1872), Oct. 05, 1♂ (USNM PBI_OON 1873), Feb. 07, 1996, 1♂, 1♀ (USNM PBI_OON 1874), Oct. 06, 1994, 1♀ (USNM PBI_OON 1875), Aug. 08, 1995, 1♂ (USNM PBI_OON 1877), June 26, 1996, 1♀ (USNM PBI_OON 1878), Oct. 08, 1995, 1♀ (USNM PBI_OON 1879), June 25, 1996, 1♀ (USNM PBI_OON 1882), Oct. 04, 1995, 2♀ (USNM PBI_OON 1883), Feb. 08, 1996, 4♀ (USNM PBI_OON 1884), June 21, 1996, 3♀ (USNM PBI_OON 1885), June 26, 1996, 3♀ (USNM PBI_OON 1886), July 06, 1995, 1♀ (USNM PBI_OON 1887), June 21, 1996, 1♀ (USNM PBI_OON 1888), Oct. 05, 1995, 6♀ (USNM PBI_OON 1889), June 26, 1996, 1♀ (USNM PBI_OON 1890), Oct. 05, 1995, 2♀ (USNM PBI_OON 1891), June 21, 1996, 2♀ (USNM PBI_OON 1892), June 26, 1996, 2♀ (USNM PBI_OON 1893), Oct. 04, 1995, 2♂ (USNM PBI_OON 1894), June 26, 1996, 2♂ (USNM PBI_OON 1895), Feb. 07, 1996, 2♂ (USNM PBI_OON 1896), July 02, 1995, 1♀ (USNM PBI_OON 1897), Feb. 07, 1996, 1♀, 1♂ (USNM PBI_OON 1898), June 21, 1996, 1♂ (USNM PBI_OON 1901), Feb. 05, 1996, 1♀ (USNM PBI_OON 1902), June 25, 1996, 8♀ (USNM PBI_OON 1904), Feb. 13, 1996, 1♀ (USNM PBI_OON 1905), Oct. 06, 1994, 1♀ (USNM PBI_OON 1906), Feb. 05, 1996, 2♀ (USNM PBI_OON 1907), June 25, 1996, 1♂ (USNM PBI_OON 1908), June 21, 1996, 2♂, 2♀ (USNM PBI_OON 1910), Oct. 06, 1994, 1♂ (USNM PBI_OON 1911), Feb. 05, 1996, 1♂ (USNM PBI_OON 1912), Oct. 06, 1994, 1♀, 2 juvenile (USNM PBI_OON 1913), June 25, 1996, 1♂, 1♀ (USNM PBI_OON 1914), Oct. 06, 1994, 3♀, 1♂ (USNM PBI_OON 1915), Feb. 13, 1996, 1♀ (USNM PBI_OON 1916), Feb. 05, 1996, 1♀ (USNM PBI_OON 1917), Oct. 07, 1995, 1♂ (USNM PBI_OON 1918), June 22, 1996, 1♂ (USNM PBI_OON 15025), June 26, 1996, 1♂ (USNM PBI_OON 15026), Feb. 05, 1996, 1♀ (USNM PBI_OON 15027), Oct. 07, 1995, 2♀ (USNM PBI_OON 15039), Oct. 06, 1994, 1♀, 1♂ (USNM PBI_OON 15040), Oct. 07, 1995, 2♂, 1♀ (USNM PBI_OON 15041), June 25, 1996, 2♀ (USNM PBI_OON 15043), Oct. 08, 1995, 2♂ (USNM PBI_OON 15044), Oct. 06, 1994, 3♀ (USNM PBI_OON 15045), Oct. 08, 1995, 2♂ (USNM PBI_OON 15046), June 21, 1996, 1♂ (USNM PBI_OON 15049), Feb. 08, 1996, 1♀ (USNM PBI_OON 15068), Aug. 08, 1995, 1♂, 1♀ (USNM PBI_OON 15069), Feb. 04, 1996, 2♂ (USNM PBI_OON 15069), June 22, 1996, 1♀ (USNM PBI_OON 15070), Feb. 05, 1996, 2♂ (USNM PBI_OON 15071), June 21, 1996, 2♂ (USNM PBI_OON 15072), Feb. 13, 1996, 1♀ (USNM PBI_OON 15073), Feb. 04, 1996, 1♀, 2♂ (USNM PBI_OON 15074), Oct. 05, 1995, 1♀ (USNM PBI_OON 15075), Oct. 05, 1995, 1♀ (USNM PBI_OON 15076), Oct. 07, 1995, 1♀ (USNM PBI_OON 15077), Feb. 04, 1996, 3♂ (USNM PBI_OON 15078), Feb. 07, 1996, 1♀ (USNM PBI_OON 15122), Feb. 07, 1996, 2♂ (USNM PBI_OON 15123), Oct. 02, 1996, 1♂ (USNM PBI_OON 15124), June 26, 1996, 3♂ (USNM PBI_OON 15125), Oct. 04, 1995, 1♀ (USNM PBI_OON 15126), June 22, 1996, 1♀ (USNM PBI_OON 15127), Feb. 08, 1996, 1♂ (USNM PBI_OON 15129), Oct. 04, 1996, 3♂ (USNM PBI_OON 15130), Oct. 04, 1995, 1♀ (USNM PBI_OON 15131), Feb. 07, 1996, 1♂, 3♀ (USNM PBI_OON 15132), Oct. 07, 1995, 1♀ (USNM PBI_OON 15133), Oct. 03, 1996, 2♀ (USNM PBI_OON 15134), Oct. 02, 1996, 1♀ (USNM PBI_OON 15135), Oct. 06, 1994, 1♂ (USNM PBI_OON 15136), June 02, 1996, 2♀ (USNM PBI_OON 15137), Feb. 07, 1996, 1♀, 2♂ (USNM PBI_OON 15138), Feb. 04, 1996, 1♂, 3♀ (USNM PBI_OON 15139), June 25, 1996, 1♂, 1♀ (USNM PBI_OON 15140), Oct. 04, 1996, 7♀ (USNM PBI_OON 15141), June 22, 1996, 1♂, 2♀ (USNM PBI_OON 15142), Oct. 04, 1995, 1♀ (USNM PBI_OON 15143), July 06, 1995, 1♂ (USNM PBI_OON 15144), Oct. 03, 1996, 1♂ (USNM PBI_OON 15145), Oct. 04, 1995, 1♀ (USNM PBI_OON 15146), Feb. 05, 1996, 1♂, 2♀ (USNM PBI_

OON 15147), June 26, 1996, 1♀ (USNM PBI_OON 15148), Oct. 04, 1995, 1♀ (USNM PBI_OON 15149), Oct. 04, 1995, 2♀ (USNM PBI_OON 15150), July 06, 1995, 1♀ (USNM PBI_OON 15151), Oct. 08, 1995, 1♀ (USNM PBI_OON 15152), Oct. 07, 1995, 1♀, 1♂ (USNM PBI_OON 15153), Oct. 05, 1995, 1♀ (USNM PBI_OON 15154), Feb. 05, 1996, 1♂ (USNM PBI_OON 15155), Feb. 04, 1996, 1♀ (USNM PBI_OON 15156), Feb. 07, 1996, 1♂, 2♀ (USNM PBI_OON 15160), Feb. 05, 1996, 1♀ (USNM PBI_OON 15161), Feb. 05, 1996, 1♀, 1♂ (USNM PBI_OON 15162), Oct. 06, 1994, 1♂, 2♀ (USNM PBI_OON 15163), Feb. 05, 1996, 2♀ (USNM PBI_OON 15165), June 26, 1996, 1♀ (USNM PBI_OON 15166), Feb. 07, 1996, 1♂ (USNM PBI_OON 15167), Oct. 04, 1995, 1♀ (USNM PBI_OON 15168), June 26, 1996, 1♀, 1♂ (USNM PBI_OON 15169), Oct. 05, 1995, 2♂ (USNM PBI_OON 15170), June 21, 1996, 1♀ (USNM PBI_OON 15171), Feb. 08, 1996, 1♂ (USNM PBI_OON 15172), June 22, 1996, 1♀ (USNM PBI_OON 15173), June 22, 1996, 1♀ (USNM PBI_OON 15174), June 25, 1996, 1♀ (USNM PBI_OON 15176), Feb. 04, 1996, 2♀ (USNM PBI_OON 15177), Feb. 04, 1996, 2♂ (USNM PBI_OON 15178), June 25, 1996, 2♀ (USNM PBI_OON 15179), Feb. 07, 1996, 1♀ (USNM PBI_OON 15180), Feb. 08, 1996, 1♂ (USNM PBI_OON 15181), Feb. 13, 1996, 1♂ (USNM PBI_OON 15182), Oct. 06, 1994, 1♀ (USNM PBI_OON 15183), Feb. 13, 1996, 1♀ (USNM PBI_OON 15184), Feb. 04, 1996, 1♂, 1♀ (USNM PBI_OON 15185), June 21, 1996, 1♀, 2♂ (USNM PBI_OON 15186), June 26, 1996, 2♂, 1♀ (USNM PBI_OON 15187), Feb. 08, 1996, 1♀, 2♂ (USNM PBI_OON 15188), June 26, 1996, 1♀ (USNM PBI_OON 15189), Oct. 08, 1995, 1♀, 2♂ (USNM PBI_OON 15190), June 22, 1996, 1♀ (USNM PBI_OON 15192), June 22, 1996, 1♂, 1♀ (USNM PBI_OON 15193), June 26, 1996, 1♂ (USNM PBI_OON 15194), Feb. 13, 1996, 1♂, 2♀ (USNM PBI_OON 15195), Oct. 02, 1996, 1♀ (USNM PBI_OON 15196), June 21, 1996, 2♂ (USNM PBI_OON 15198), Oct. 08, 1995, 1♀ (USNM PBI_OON 15199), Oct. 07, 1995, 2♂ (USNM PBI_OON 15200), June 25, 1996, 1♀ (USNM PBI_OON 15201), Oct. 08, 1995, 2♂, 2♀ (USNM PBI_OON 15202), Oct. 05, 1995, 1♀ (USNM PBI_OON 15203), June 22, 1996, 1♀, 1♂ (USNM PBI_OON 15204), Feb. 07, 1996, 1♂ (USNM PBI_OON 15205), Oct. 05, 1995, 1♀ (USNM PBI_OON 15207), June 26, 1996, 1♀ (USNM PBI_OON 15208), Feb. 04, 1996, 1♀ (USNM PBI_OON 15211), June 26, 1996, 1♀ (USNMPBI_OON 15212), June 21, 1996, 1♀ (USNM PBI_OON 15217), Feb. 08, 1996, 1♀ (USNM PBI_OON 15218), Feb. 08, 1996, 1♀, 1♂ (USNM PBI_OON 21152), Feb. 13, 1996, 2♀ (USNM PBI_OON 30012), Feb. 07, 1996, 2♂ (USNM PBI_OON 30017), Oct. 05, 1995, 1♀ (USNM PBI_OON 30532), Feb. 07, 1996, 1♀, 1♂ (USNM PBI_OON 30653), Feb. 05, 1996, 1♂ (USNM PBI_OON 43027); Estación Científica Yasuní, Río Tiputini, wet forest, 295 m, −0.63194°, −76.14416°, Dec. 01, 2009, to Dec. 05, 2009, M.J. Ramírez (Niarchos Expedition), 1♀, 2♂ (MACN-AR 27121 PBI_OON 30600), 1 juvenile (MACN-AR 27121 PBI_OON 30600), 1♂ (MACN-AR 26906 PBI_OON 30660), 1♂ (MACN-AR 26905 PBI_OON 30832); Tiputini Biodiversity Station, nr Yasuní National Park, 250 m, −0.63194°, −76.14416°, Oct. 24, 1998, T. Erwin et al., 2♀, 2♂ (USNM PBI_OON 15093), July 01, 1998, 1♂ (USNM PBI_OON 15094), Oct. 22, 1998, 2♂, 3♀ (USNM PBI_OON 15107), July 05, 1998, 2♀ (USNM PBI_OON 15108), Oct. 22, 1998, 3♀, 3♂ (USNM PBI_OON 15109), Oct. 24, 1998, 5♀, 4♂ (USNM PBI_OON 15110), July 01, 1998, 1♀ (USNM PBI_OON 15111), Oct. 22, 1998, 1♂ (USNM PBI_OON 15112), Oct. 24, 1998, 1♂, 1♀ (USNM PBI_OON 15113), July 05, 1998, 1♀ (USNM PBI_OON 15114), Oct. 24, 1998, 1♀ (USNM PBI_OON 15115), Oct. 24, 1998, 1♂ (USNM PBI_OON 15116), Oct. 24, 1998, 1♀ (USNM PBI_OON 15118), Oct. 24, 1998, 1♂ (USNM PBI_OON 15119), July 05, 1998, 1♂ (USNM PBI_OON 15120), July 01, 1998, 1♀, 2♂ (USNM PBI_OON 15121), Oct. 22, 1998, 1♀ (USNM PBI_OON 15158). **Santo Domingo de los Tsáchilas:** Tinalandia, 16 km NE Santo Domingo, 700 m, −0.32103°, −78.95158°, Apr. 04, 1985, to July 25, 1985, S., J. Peck, 1♂ (AMNH PBI_OON 1867).

DISTRIBUTION: Napo, Orellana, and Santo Domingo de los Tsáchilas, Ecuador (map 7).

NATURAL HISTORY: Most specimens from the type locality were obtained through canopy fogging; the specimens from Jatun Sacha were collected by beating foliage in an Amazonian rainforest.

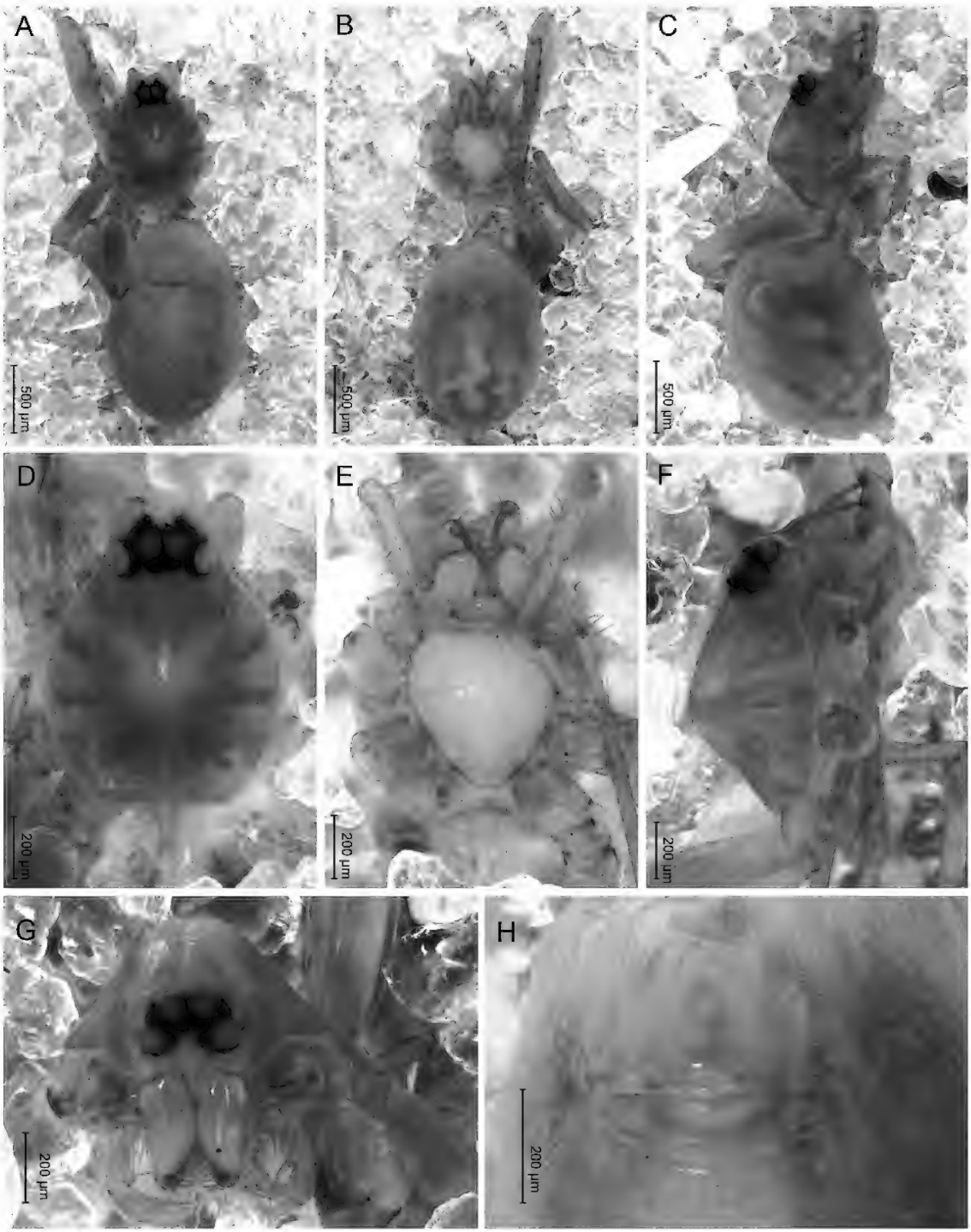


Fig. 97. *Neotrops santamarta*, new species, female PBI_OON 37061. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Same, anterior view. **H.** Epigynum, ventral view.

Map 10. Records of *Neotrops santamarta* (triangle) and *N. caparu* (circle).

Neotrops santamarta, new species
Figures 97, 99E; map 10

TYPE: Female holotype from Colombia: La Guajira: San Pedro to Cuchilla Cebolleta, Sierra Nevada de Santa Marta, Feb. 28, 1975, J. Kochalka, 1♀ (AMNH PBI_OON 37061). Deposited in AMNH.

ETYMOLOGY: This specific epithet is a noun in apposition taken from the type locality.

DIAGNOSIS: Females of *N. santamarta* are recognized by the large, nearly cylindrical anterior receptacle apparently fused to the shortened and thickened transverse basal ridges (fig. 99E).

DESCRIPTION: FEMALE (holotype, PBI_OON 37061). Total length 2.49. **Cephalothorax:** Carapace pale orange, broadly oval in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to less than half their maximum width, with eight radial bands slightly darker than the color background (fig. 97D); lateral margin straight; nonmarginal pars cephalica setae absent; nonmarginal pars thoracica setae absent; marginal setae absent. Clypeus setae absent. Eyes all subequal, all eyes circular; posterior eye row straight from front; ALE separated by more than their diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum longer than wide, yellow-brown, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV, precoxal triangles present; setae sparse, light, evenly scattered. Mouthparts: chelicerae, endites, and labium pale orange; cheliceral setae light. Labium elongated hexagon, anterior margin not indented at middle; with six or more setae on anterior margin. Palp spines absent. **Abdomen:** Dorsum gray. Book lung covers elliptical. Postepigastric scutum pale orange. Spinneret scutum absent. Dorsum setae light, needle-

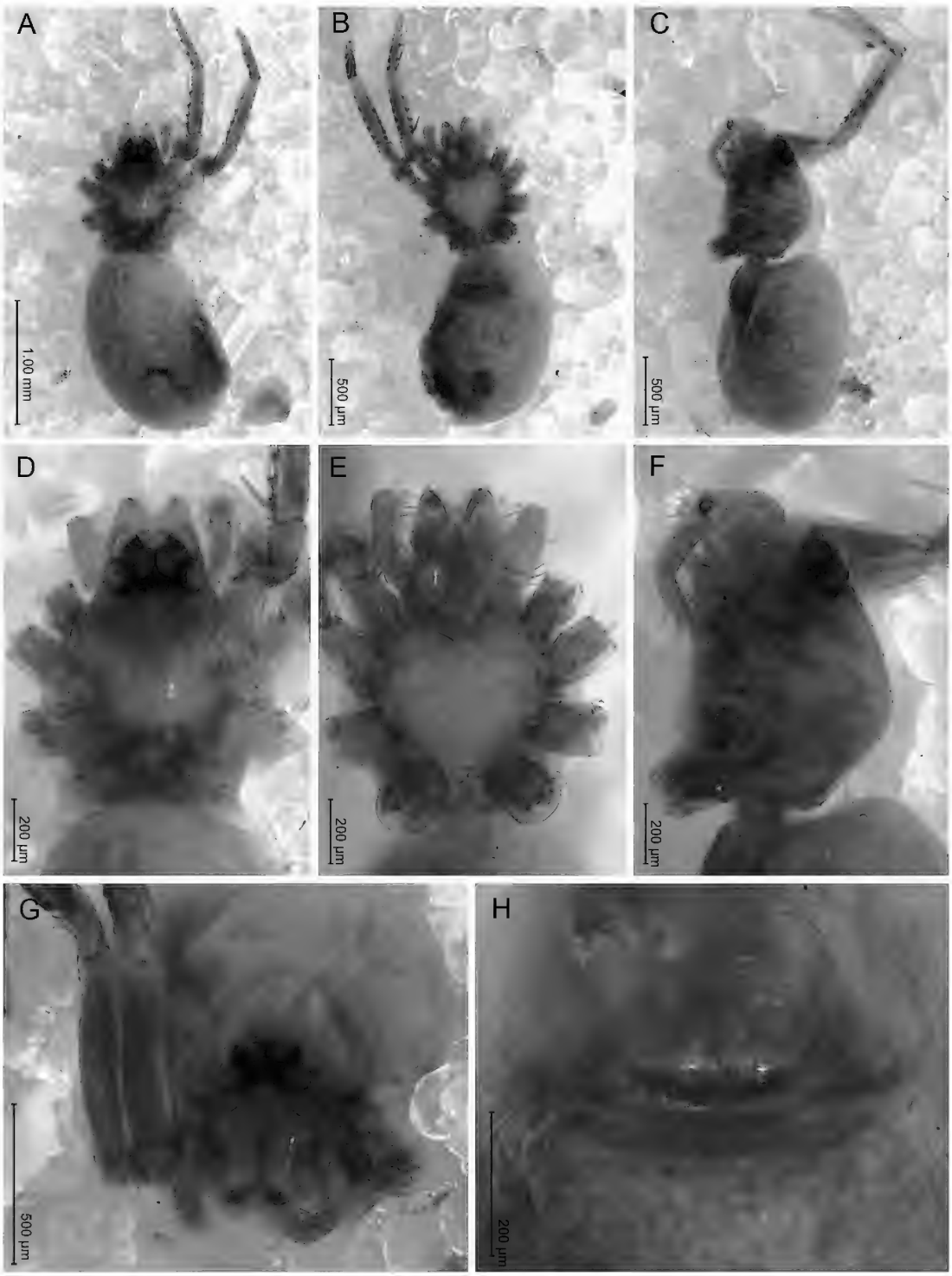


Fig. 98. *Neotrops maracay*, new species, female PBI_OON 01691. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

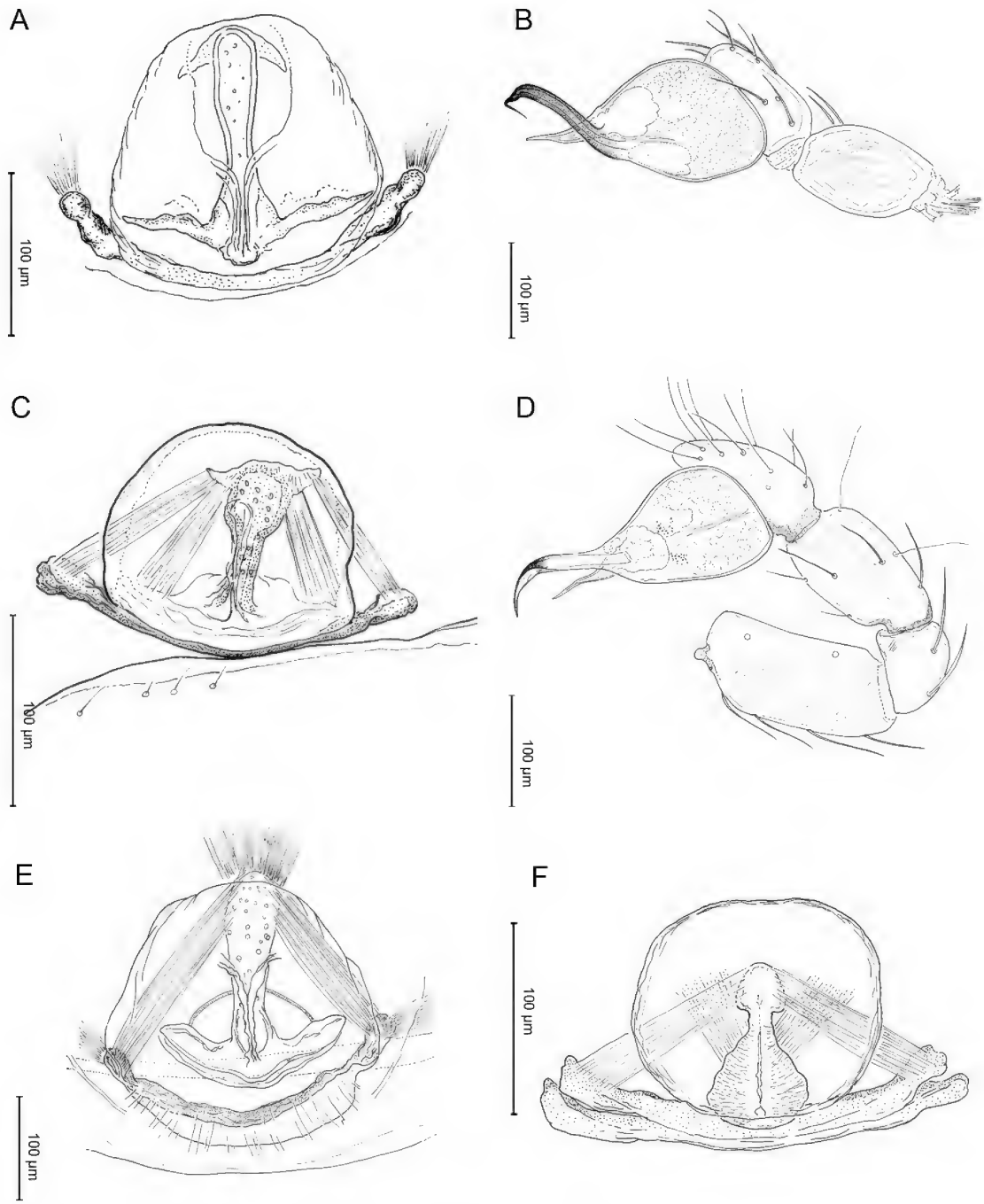
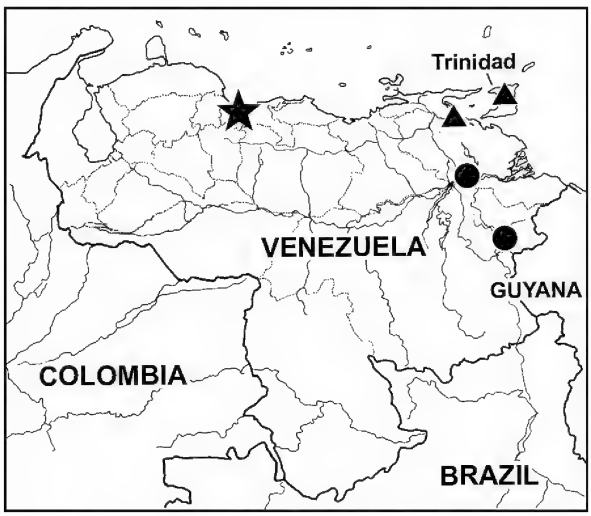


Fig. 99. *Neotrops* spp. genitalia, cleared. **A–B.** *Neotrops donaldi* (Chickering). **C–D**, *N. waorani,* new species. **E**, *N. santamarta,* new species. **F**, *N. maracay,* new species. **A.** Internal female genitalia, dorsal view (PBI_OON 42033). **B.** Male palp, retrolateral view (PBI_OON 36849). **C.** Internal female genitalia, dorsal view (PBI_OON 01874). **D.** Male palp, retrolateral view (PBI_OON 01874). **E.** Internal female genitalia, dorsal view (PBI_OON 36071). **F.** Internal female genitalia, dorsal view (PBI_OON 01782).



Map 11. Records of *Neotrops amacuro* (circles), *N. trapellus* (triangles) and *N. maracay* (star).

like, most broken off. Postepigastric area setae absent. Colulus represented only by setae. **Legs:** Yellow-brown; femur IV not thickened, same size as femora I–III, patella plus tibia I nearly as long as carapace. Leg spination: leg I: tibiae v2-2-2-2-2-1(vr)-0, metatarsi v2-2-2-2; leg II: tibiae v2-2-2-2-2-1(vr)-0, metatarsi v2-2-2-2; leg III: tibiae d1, v1-1ap, metatarsi d1, v1; leg IV: tibiae d1, v1-1ap; metatarsi d1. Trichobothria not examined. **Genitalia** (figs. 97H, 99E): Anterior receptacle cylindrical, long (surpassing posterodorsal plate), bearing numerous pores (presumably connected to glands); apex rounded, base sclerotized and apparently fused with the basal transverse ridges; uterus externus with longitudinal, narrow opening.

MALE: Unknown.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Only known from the type locality, in La Guajira Department, Colombia (map 10).

Neotrops maracay, new species
Figures 98, 99F; map 11

TYPES: Female holotype from Venezuela: Aragua: Maracay: Rancho Grande, 1200 m, Aug. 01, 1987, to Aug. 10, 1987, Bordan, Peck (AMNH PBI_OON 1691); female paratype with the same data (AMNH PBI_OON 1782). Deposited in AMNH.

ETYMOLOGY: This specific epithet is a noun in apposition taken from the type locality.

DIAGNOSIS: *N. maracay* females are easily recognized by the very widened base of the anterior receptacle (fig. 99F).

DESCRIPTION: FEMALE (holotype, PBI_OON 1691). Total length 2.20. **Cephalothorax:** Carapace yellow-brown, broadly oval in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to less than half their maximum width; lateral margin straight; nonmarginal pars cephalica setae absent, setae actually broken off, but bases remain; nonmarginal pars thoracica setae absent; marginal setae absent. Clypeus setae absent. Eyes all subequal, all eyes circular; posterior eye row straight from front; ALE separated by more than their diameter, ALE-PLE separated by less than ALE radius, PME touching for less than half their length, PLE-PME separated by less than PME radius. Sternum as long as wide, yellow-brown, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV, precoxal triangles present; setae abundant, dark, evenly scattered. Mouthparts: chelicerae, endites, and labium orange-brown; cheliceral setae light. Labium elongated hexagon, anterior margin indented at middle; with six or more setae on anterior margin. Palp spines absent. **Abdomen:** Dor-

sum pale orange. Book lung covers round. Postepigastric scutum orange-brown. Spinneret scutum absent. Dorsum setae light, needlelike. Postepigastric area setae light, needlelike. Colulus represented only by setae. **Legs:** Orange-brown; patella plus tibia I shorter than carapace. Leg spination (legs III–IV missing): leg I: tibiae V2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: tibiae V2-2-2-2-2-0, metatarsi v2-2-2-2. Tarsi I–II superior claws not examined in detail. Trichobothria not examined. **Genitalia:** Ventral view: anterior receptacle visible through cuticle; transverse basal ridges darkened (fig. 98H). Dorsal view: anterior receptacle with an arrow-shaped distal tip and a greatly expanded basal part, with thick walls, and connected by muscles to the transverse ridge and—presumably—the ventral cuticle also (fig. 99F).

MALE: Unknown.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Only know from the type locality, in Aragua State, Venezuela (map 11).

Neotrops caparu, new species
Figures 100–102, 109A–B; map 10

TYPES: Male holotype, one male and one female paratypes from Colombia: Vaupés: Taraira: Lago Taraira bajo Rio Apaporis, Est Biol. Caparu, 200 m, Apr. 01, 2003, Ligia Benavides (ICN PBI_OON 43162). Deposited in ICN.

ETYMOLOGY: This specific epithet is a noun in apposition taken from the type locality.

DIAGNOSIS: *N. caparu* males are very similar to those of *N. kopuchianae* by the shape of the bulb and its terminal elements, but differ by the bulb less tapering distally, and in having a small protrusion in the embolus, where the filiform part arises (figs. 101B, 109B). Females also resemble those of *N. kopuchianae* by the T-shaped anterior receptacle, but the transverse distal projections are shorter (fig. 109A).

DESCRIPTION: MALE (holotype, PBI_OON 43162). Total length 1.66. **Cephalothorax:** Carapace yellow-brown, broadly oval in dorsal view, pars cephalica slightly elevated in lateral view, anteriorly narrowed to less than half their maximum width; lateral margin straight; nonmarginal pars cephalica setae dark, needlelike; nonmarginal pars thoracica setae dark, needlelike; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes: ALE, PLE larger than PME, ALE circular, PME oval, PLE circular; posterior eye row straight from front; ALE separated by their radius to diameter, ALE-PLE touching, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum longer than wide, yellow, anterior margin with semicircular depression in the middle, posterior margin not extending posteriorly of coxae IV (fig. 100E); setae sparse, evenly scattered. Mouthparts: chelicerae, endites, and labium pale orange; cheliceral setae light, evenly scattered. Labium anterior margin indented at middle; with six or more setae on anterior margin. Endites distally not excavated, anteromedian tip with backward folded ridge, with anterior lateral expansions, with ectal ridges that continue the ventral folded structures (fig. 100E). **Abdomen:** Dorsum white. Book lung covers round. Postepigastric scutum yellow. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:** Yellow; femur IV slightly thickened. Leg spination: leg I: femora d1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora d1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d1, tibiae d1, p1-1, metatarsi d1subap, r1-1, v2ap, p1subap; leg IV: femora d1-0-0, tibiae p1-1, r1-1, v1, metatarsi d1, p0-1, r0-1, v1-2ap. Trichobothria not examined. **Genitalia:** Palp proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, not fused with bulb; bulb pale orange, 1 to 1.5 times as long as cymbium, slender, tapering apically; embolus dark, distal half threadlike, proximal half thicker; boundary of both sections with short, dorsal branch; embolus with filiform distal sector (figs. 101B, 109B); conductor with small, translucent, acute tip (figs. 101B–D, 109B).

FEMALE (paratype, PBI_OON 43162). Total length 1.98. As in male except as noted. **Cephalothorax:** Carapace pars cephalica strongly elevated in lateral view. Sternum anterior margin unmodified, precoxal trian-

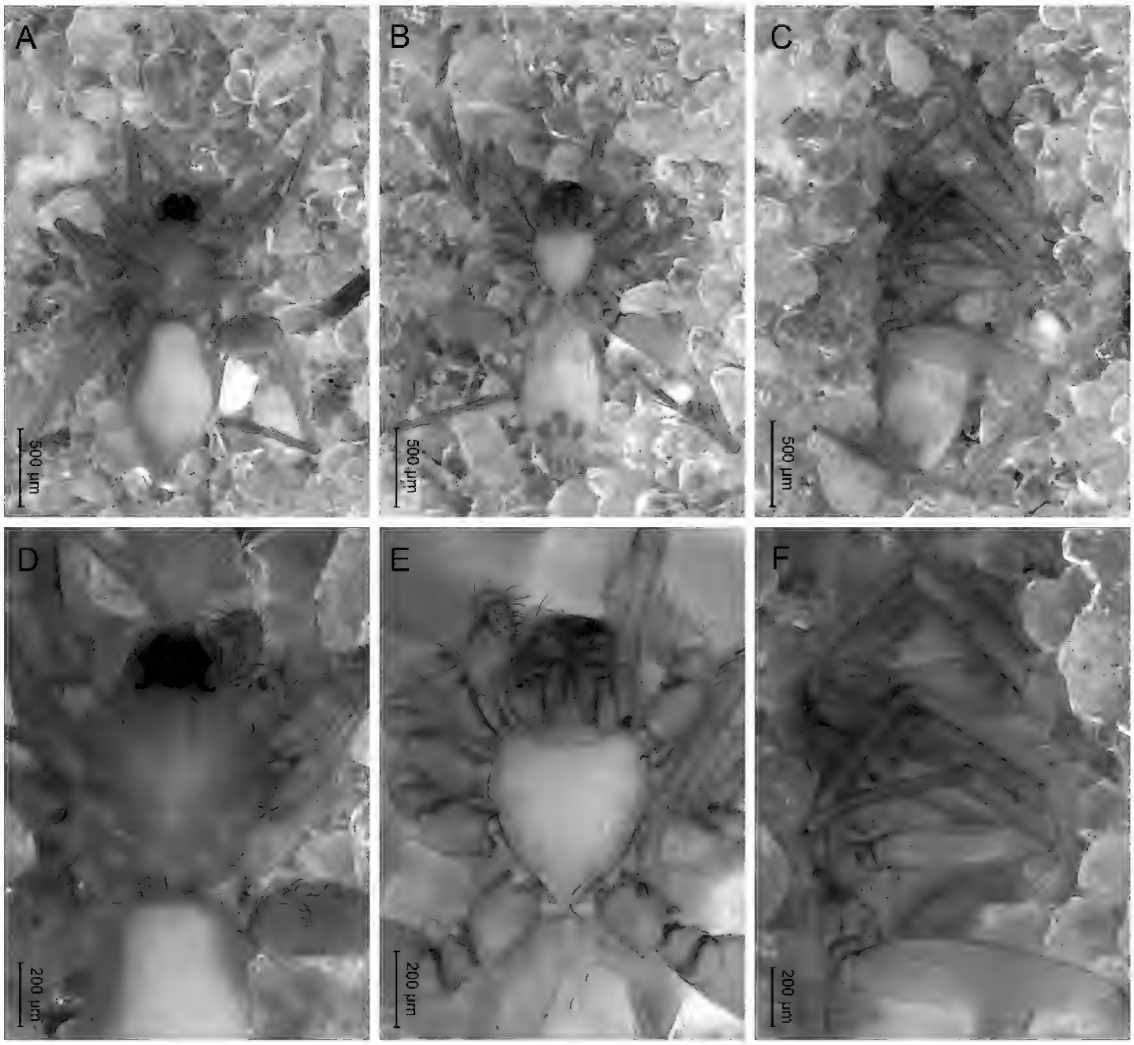


Fig. 100. *Neotrops caparu*, new species, male PBI_OON 43162. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

gles present; setae dark. Labium elongated hexagon. Palp spines absent. **Abdomen:** Post-epigastric area setae dark, needlelike. **Legs:** Patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora d1-0, tibiae v2-2-2-2-2-0, metatarsiv2-2-2-2; leg II: femora d1-0, tibiae v2-2-2-2-2-0, metatarsiv2-2-2-2; leg III: femora d1-1, tibiae d1, p1-0, v1-1ap, metatarsi d1-1, r1-1, v1ap, p0-1; leg IV: femora d1-1-1, tibiae d1, p1-1, r1-1, v1-1ap, metatarsi d1-1, p1-1, r1-1, v1-2ap. **Genitalia:** Dorsal view: anterior receptacle relatively narrow, distal part slightly expanded laterally; posterodorsal plate oval, elongated, reaching tip of anterior receptacle (fig. 109A).

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Known only from the type locality in Vaupés Department, Colombia (map 10).

Neotrops amacuro, new species
Figures 103–105, 109C–D; map 11

TYPES: Male holotype from Venezuela: Delta Amacuro: Piacoa: 11 km W. Piacoa, July 14, 1987, to July 31, 1987, S., J. Peck

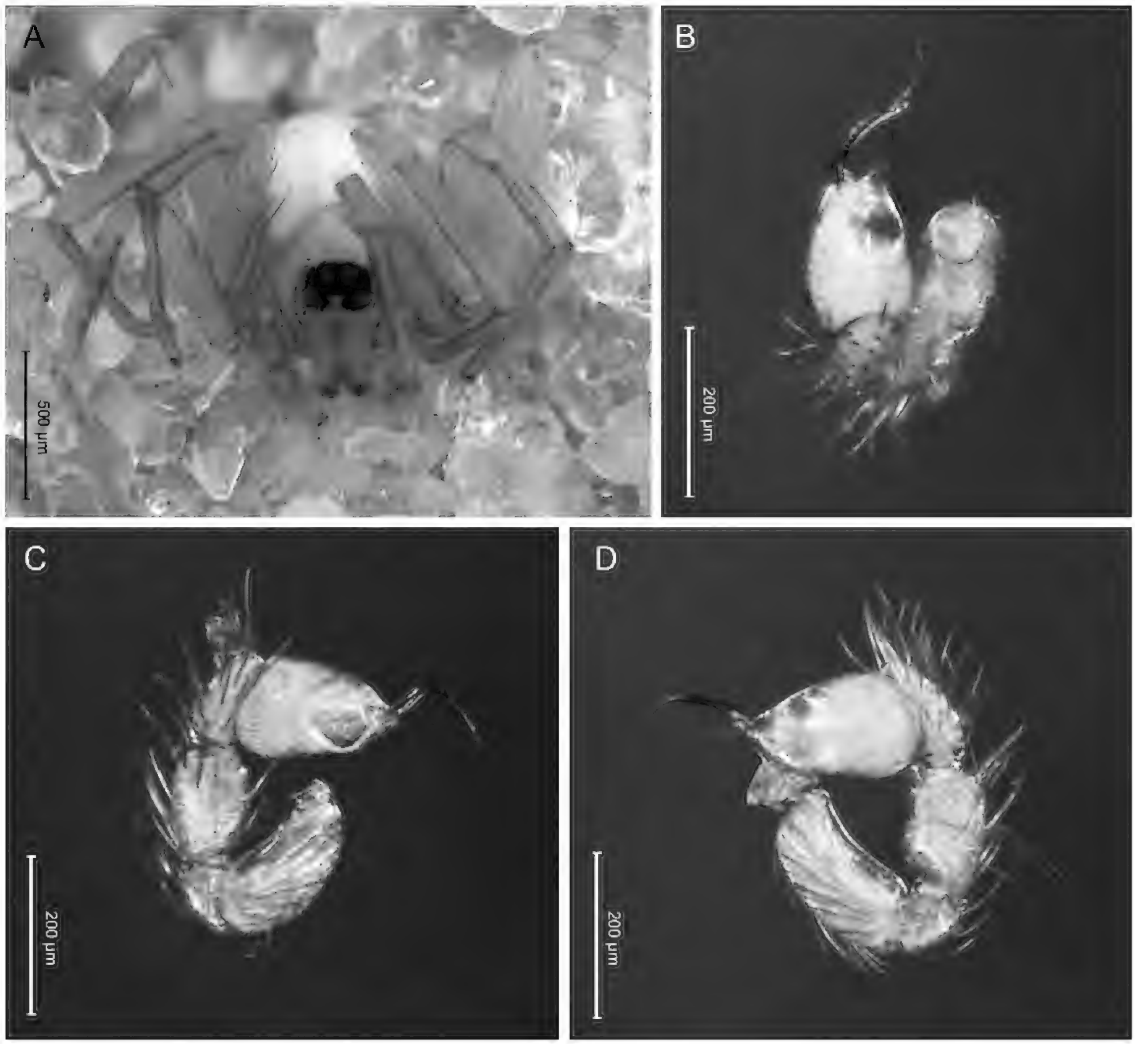


Fig. 101. *Neotrops caparu*, new species, male PBI_OON 43162. **A.** Habitus, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

(AMNH PBI_OON 1693); two female paratypes from Bolívar: Tumeremo: 20 km S. Tumeremo, June 24, 1987, to July 12, 1987, S., J. Peck (AMNH PBI_OON 1698). Deposited in AMNH.

ETYMOLOGY: This specific epithet is a noun in apposition taken from the type locality.

DIAGNOSIS: *N. amacuro* males are distinguished by the nearly cylindrical bulb with relatively short embolus and short, nearly triangular conductor (figs. 104B–D, 109D); females by the thin, narrow anterior receptacle (fig. 105H, 109C).

DESCRIPTION: MALE (holotype, PBI_OON 1693). Total length 1.66. **Cephalothorax:** Carapace pale orange, broadly oval in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to between 0.5 and 0.75 times its maximum width; lateral margin straight; nonmarginal pars cephalica setae dark, needlelike, scattered; nonmarginal pars thoracica setae absent; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes: the ocular area is not well preserved, the dark area is currently depigmented, all subequal, ALE circular, PME

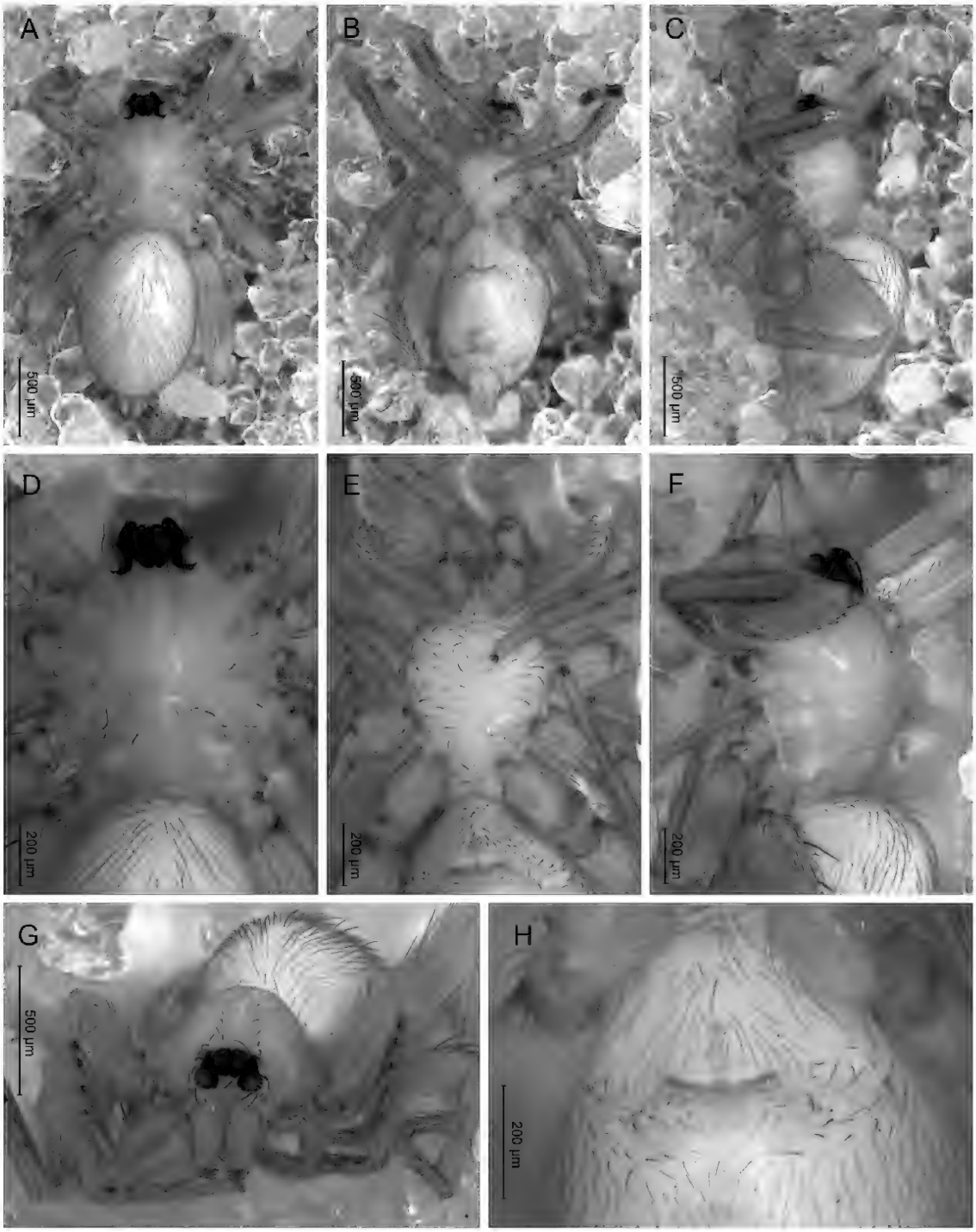


Fig. 102. *Neotrops caparu*, new species, female PBI_OON 43162. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

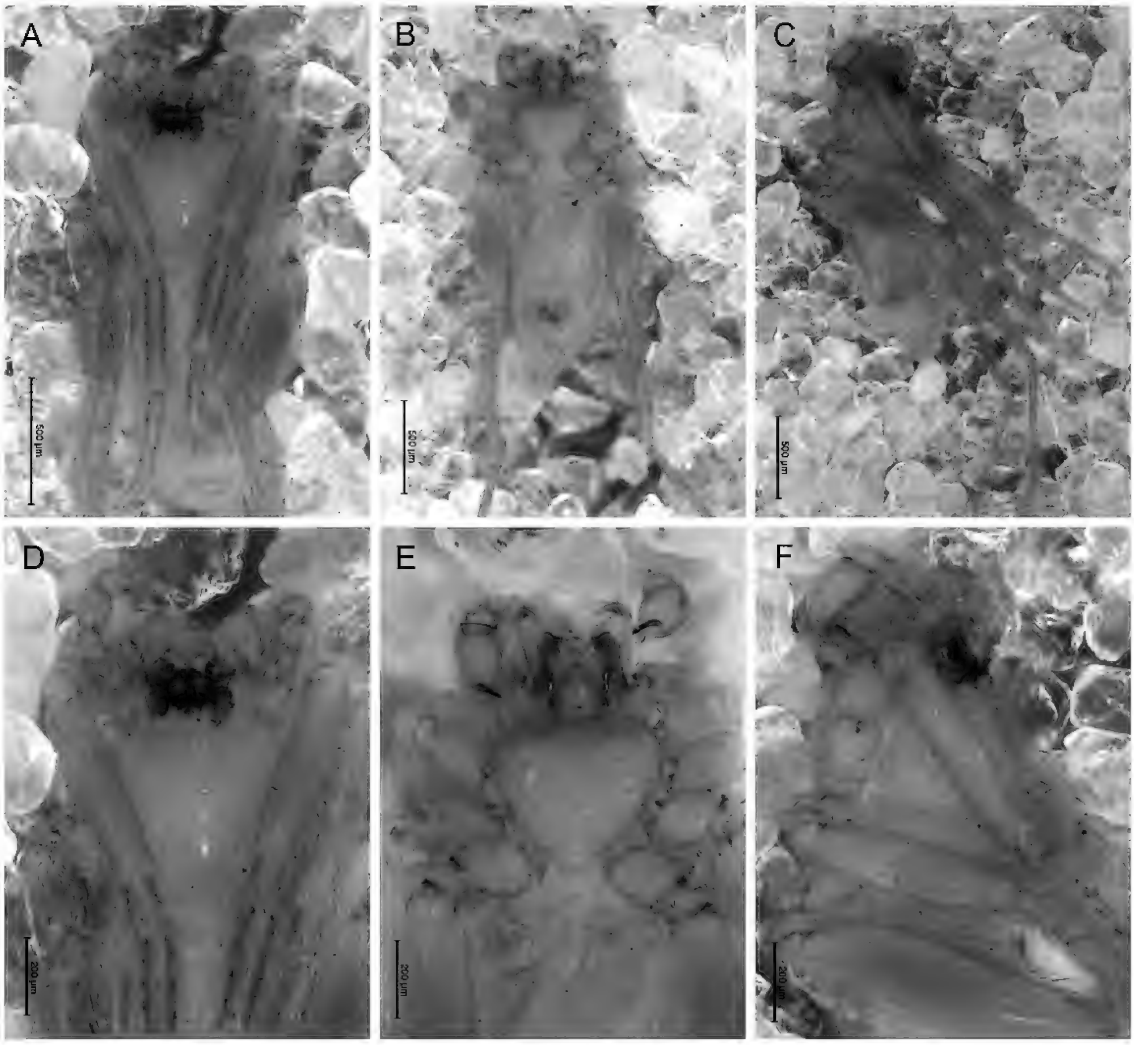


Fig. 103. *Neotrops amacuro*, new species, male PBI_OON 01693. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

oval, PLE circular; posterior eye row straight from front; ALE separated by more than their diameter, ALE-PLE separated by less than ALE radius, PME separated by less than their radius, PLE-PME separated by less than PME radius. Sternum as long as wide, pale orange, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV; setae sparse, evenly scattered. Mouthparts: chelicerae, endites, and labium pale orange; cheliceral setae light, evenly scattered. Labium anterior margin indented at middle. Endites distally not excavated, anteromedian tip with backward-folded ridge, anterior margin truncated, the backward-folded ridges extend to the labium base (fig. 103E). **Abdomen:** Dorsum pale white. Book lung covers round. Postepigastric scutum pale orange. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:** Pale orange; femur IV thickened, much larger than femora I–III (fig. 103C, F). Leg spination: leg I: tibiae v2-2-2-2-2-0-0, metatarsi v2-2-2-2; leg II: tibiae v2-2-2-2-2-0-0, metatarsi lost; leg III: femora d1 tibiae p1-1, r1, v1

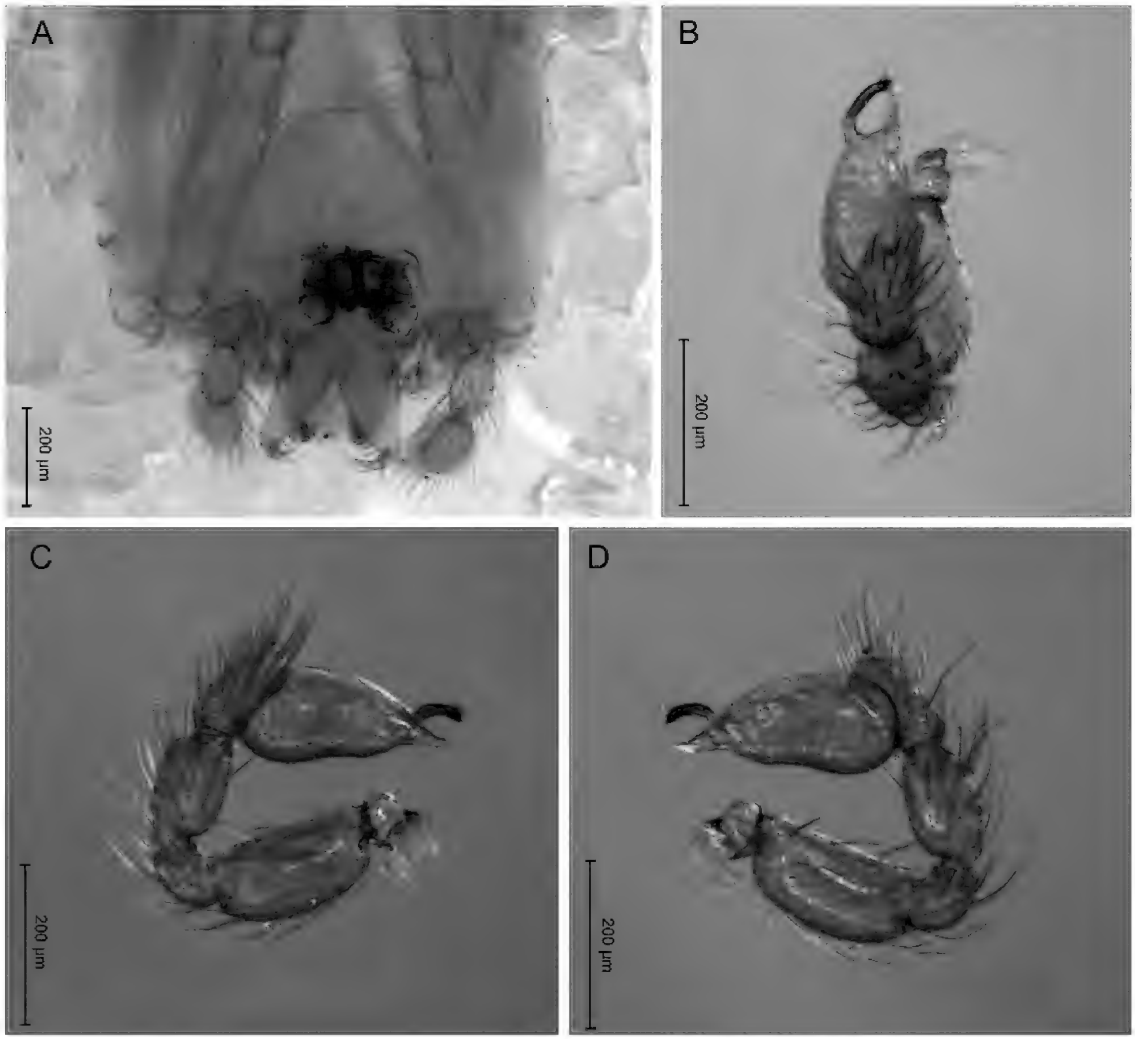


Fig. 104. *Neotrops amacuro*, new species, male PBI_OON 01693. **A.** Carapace, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

metatarsi r1-0, v1-2ap; leg IV: femora d1-1, tibiaep1-0, r1-1, v1 metatarsi p1-1, r1-1, v1-2ap. Trichobothria not examined. **Genitalia:** Palp proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, not fused with bulb; bulb pale orange, 1 to 1.5 times as long as cymbium, nearly cilyndrical, tapering apically, distal part conductor short, translucent, nearly triangular; embolus dark, embolus relatively short, with a wide distal opening with membraneous margins (figs. 104B–D, 109C).

FEMALE (paratype, PBI_OON 1698). Total length 2.19. As in male except as noted. **Cephalothorax:** Eyes as in male, ocular area not well preserved, dark area depigmented. Sternum precoxal triangles present; setae dark. Labium elongated hexagon. Palp spines absent. **Abdomen:** Dorsum pale orange. Postepigastric area setae dark, needlelike. **Legs:** Patella plus tibia I nearly as long as carapace. Leg spination (legs I missing): leg II: femora d1; tibiae v2-2-2-2-2-1(vr); metatarsi v2-2-2-2; leg III: femora d1-1; tibiae r1, v2ap metatarsi p1-1, r1-1, v1; leg IV: femora

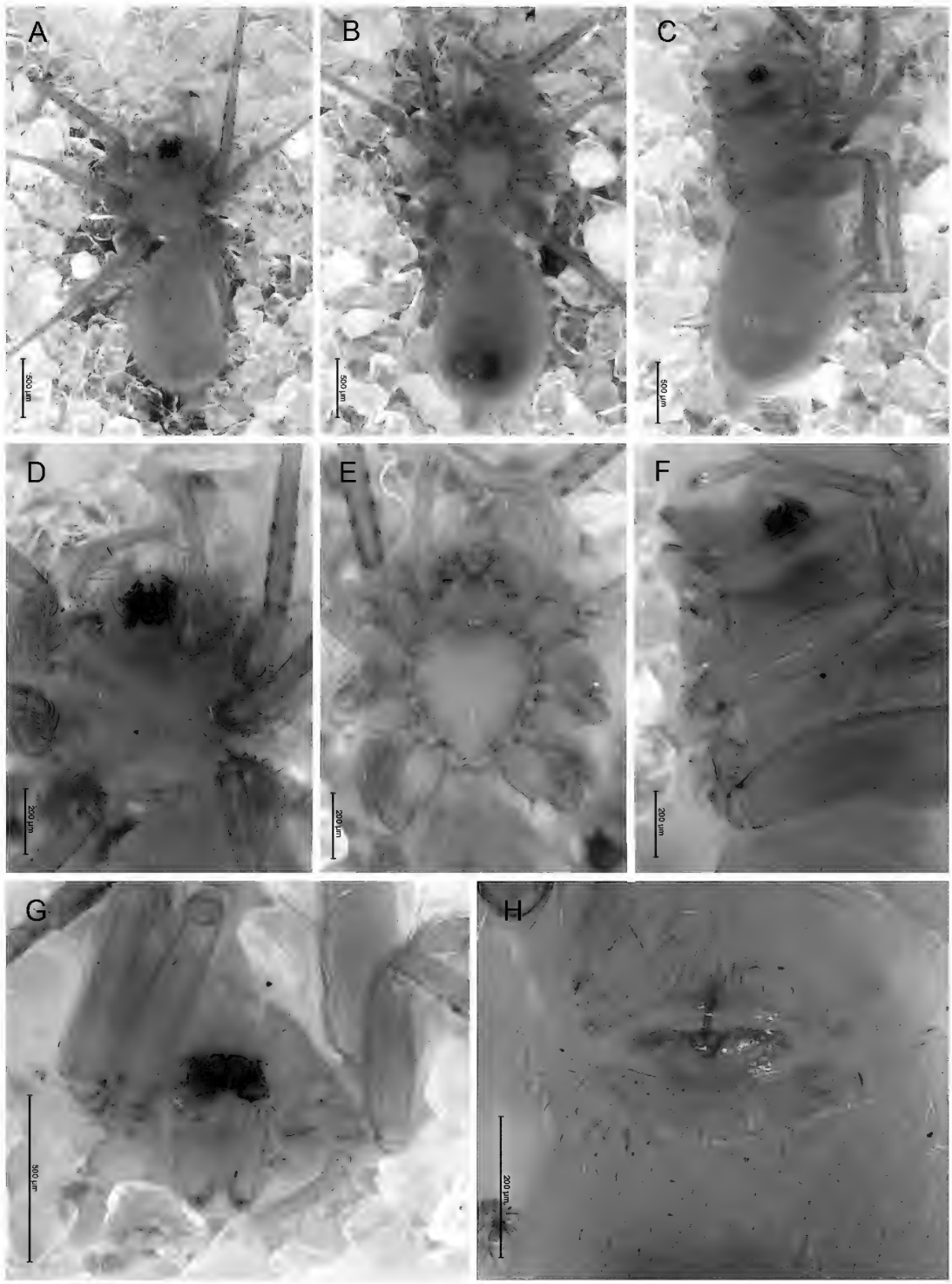


Fig. 105. *Neotrops amacuro*, new species, female PBI_OON 01698. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

d1-1; tibiae d1, p1-1, r1-1, v1ap metatarsi d1, p1-1, r1-1, v1-2ap. **Genitalia:** Dorsal view (fig. 109C): anterior receptacle thin, without distal expansion, muscle insertions not visible; transverse ridge sclerotized, apparently complex, composed of several plates; uterus externus narrow, posterior plate nearly triangular, surpassing dorsally the tip of the antertior receptacle.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Delta Amacuro and Bolívar states, Venezuela (map 11).

NOTE: The male and the females were not collected together but are matched by geographical proximity.

Neotrops trapellus (Chickering, 1970), new combination
Figures 106–108, 109E–F; map 11

Oonops trapellus Chickering, 1970: 501, figs. 27–29. Male holotype from Trinidad and Tobago: Trinidad: Arima: Arima Valley, Simla, Apr. 19, 1964, A. Chickering (MCZ 23324 PBI_OON 36844), and one male paratype from Trinidad, 10.41032°, −61.69009°, Apr. 19, 1964, A. Chickering (MCZ 66779 PBI_OON 36843), examined. Deposited in MCZ.

DIAGNOSIS: *N. trapellus* males are recognized by the shape of the conductor, sharp, spinelike, with dorsobasal swelling (figs. 107B–D, 109F), and females by the widely expanded and rounded distal part of the anterior receptacle, combined with very thin transverse ridges (fig. 109E).

DESCRIPTION: MALE (holotype, PBI_OON 36844). Total length 1.80. **Cephalothorax:** Carapace yellow-brown, broadly oval in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to between 0.5 and 0.75 times its maximum width; lateral margin straight; nonmarginal pars cephalica setae absent, seem to be lost (bases remain); nonmarginal pars thoracica setae absent; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes: all subequal, ALE circular, PME oval, PLE circular; posterior eye row straight from front; ALE separated by more than their diameter, ALE-PLE touching, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum as long as wide, yellowish white, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV; setae sparse, evenly scattered. Mouthparts: chelicerae, endites, and labium yellowish white; cheliceral setae light, evenly scattered. Labium anterior margin indented at middle; with six or more setae on anterior margin. Endites distally excavated, anteromedian tip with one strong, toothlike projection (fig. 106E). **Abdomen:** Dorsum white. Book lung covers round. Postepigastric scutum white. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:** Yellow-brown; femur IV thickened, much larger than femora I–III (fig. 106C). Leg spination: leg I: femora d0-0-1, tibiae v2-2-2-2-2-0, v2-2-2-2; leg II: tibiae v2-2-2-2-2-0, v2-2-2-2; leg III: femora d1, tibiae p1-1, v2ap, metatarsi p1-1, v2ap; leg IV: femora d1; tibiae p0-1, v1-2ap; metatarsi p1-1, v1-2ap. Trichobothria not examined. **Genitalia:** Palp proximal segments yellow-brown; femur normal size, two or more times as long as trochanter; cymbium yellow-brown, ovoid in dorsal view, not fused with bulb; bulb white, 1 to 1.5 times as long as cymbium, slender, tapering apically; conductor spinelike, distally attenuated, basally with translucent flange; embolus dark (figs. 107B–D, 109F).

FEMALE (PBI_OON 1696). Total length 2.57. As in male except as noted. **Cephalothorax:** Carapace pale orange; nonmarginal pars cephalica setae dark, needlelike, scattered. Eyes: the ocular area is slightly damaged in this specimen. Sternum pale orange, precoxal triangles present; setae dark. Mouthparts: chelicerae, endites, and labium pale orange. Labium elongated hexagon. Palp spines absent. **Abdomen:** Dorsum pale white. Postepigastric scutum pale orange. Postepigastric area setae dark, needlelike. **Legs:** Pale orange; patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora d0-1-1-1, tibiae v2-2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora d0-1-1-1, tibiae v2-2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d0-1-1-1-1, tibiae p1-1, r1-1, v1-0, d1, metatarsi p1-1, v0-1-1-2ap, r1-1; leg IV: femora d0-1-1-1, tibiae d1, p1-1, v0-1-2ap, r1-1 metatarsi d1-0-1, p1-1, v0-1-2ap, r1ap. **Genitalia:** Anterior receptacle elongated, with

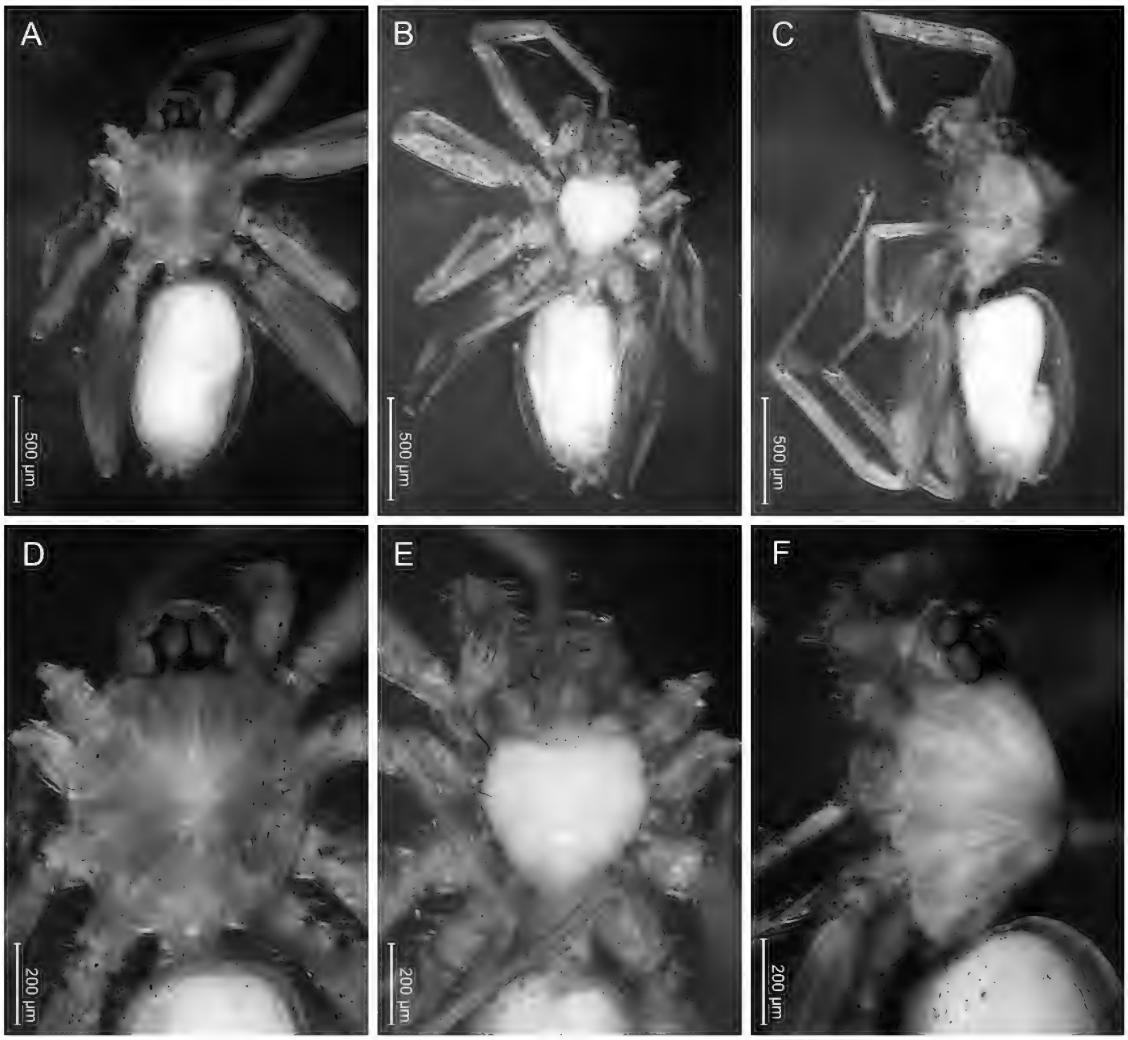


Fig. 106. *Neotrops trapellus* (Chickering), male PBI_OON 36844. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

widened, rounded distal part (appearing orange in ventral view, fig. 108H); with presumably glandular tissue visible at base (fig. 109E); uterus externus opening V-shaped, with thickened margins; basal ridges very thin, gently procurved; posterodorsal plate surpassing anterior receptacle, covering it completely in dorsal view (fig. 109E).

OTHER MATERIAL EXAMINED: **VENEZUELA: Monagas**: Caripé: 27 km SW Caripé, 300 m, July 19, 1987, to July 31, 1987, S., J. Peck, 1♂, 1♀ (AMNH PBI_OON 1696).

DISTRIBUTION: Venezuela (Monagas State) and Trinidad (map 11).

Neotrops pakitza, new species
Figures 110–112, 116A–B; map 8

TYPES: Male holotype and male paratype (with one immature) from Peru: Madre de Dios Department: Manu Province: Zona Reservada Pakitza, 356 m, −11.93333°, −71.28333°, June 01, 1992, T. Erwin, D. Silva (MUSM-ENT 0501560 PBI_OON 43055). Deposited in MUSM.

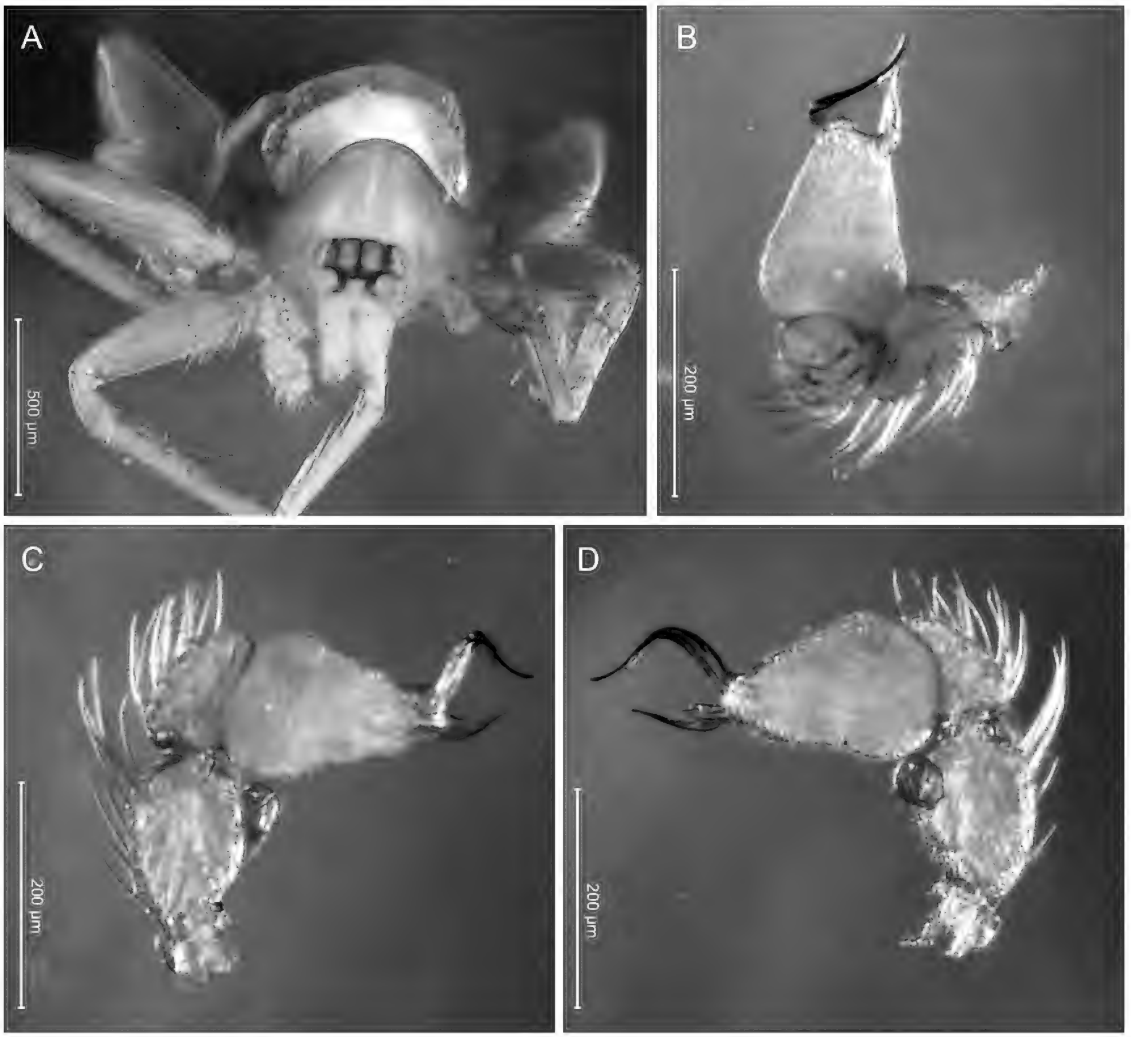


Fig. 107. *Neotrops trapellus* (Chickering), male PBI_OON 36844. **A.** Habitus, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

ETYMOLOGY: This specific epithet is a noun in apposition taken from the type locality.

DIAGNOSIS: *N. pakitza* males are distinguished by the embolus with a small curled tip, and a broad, membranous conductor, nearly parallel to embolus in lateral view (figs. 111B–D, 116B); females by the mushroomlike anterior receptacle in combination to a nearly triangular posterodorsal plate (fig. 112H, 116A).

DESCRIPTION: MALE (holotype, PBI_OON 43055). Total length 1.77. **Cephalothorax:** Carapace yellow, broadly oval in dorsal view, pars cephalica slightly elevated in lateral view, anteriorly narrowed to between 0.5 and 0.75 times its maximum width; lateral margin undulate; nonmarginal pars cephalica setae absent; nonmarginal pars thoracica setae absent; marginal setae dark, needlelike. Clypeus setae absent. Eyes all subequal, ALE oval, PME circular, PLE circular; posterior eye row procurved from front; ALE separated by more than their diameter, ALE-PLE separated by less than ALE radius, PME touching for less than half their length, PLE-PME separated by less than PME radius. Sternum as long as wide, yellow, posterior

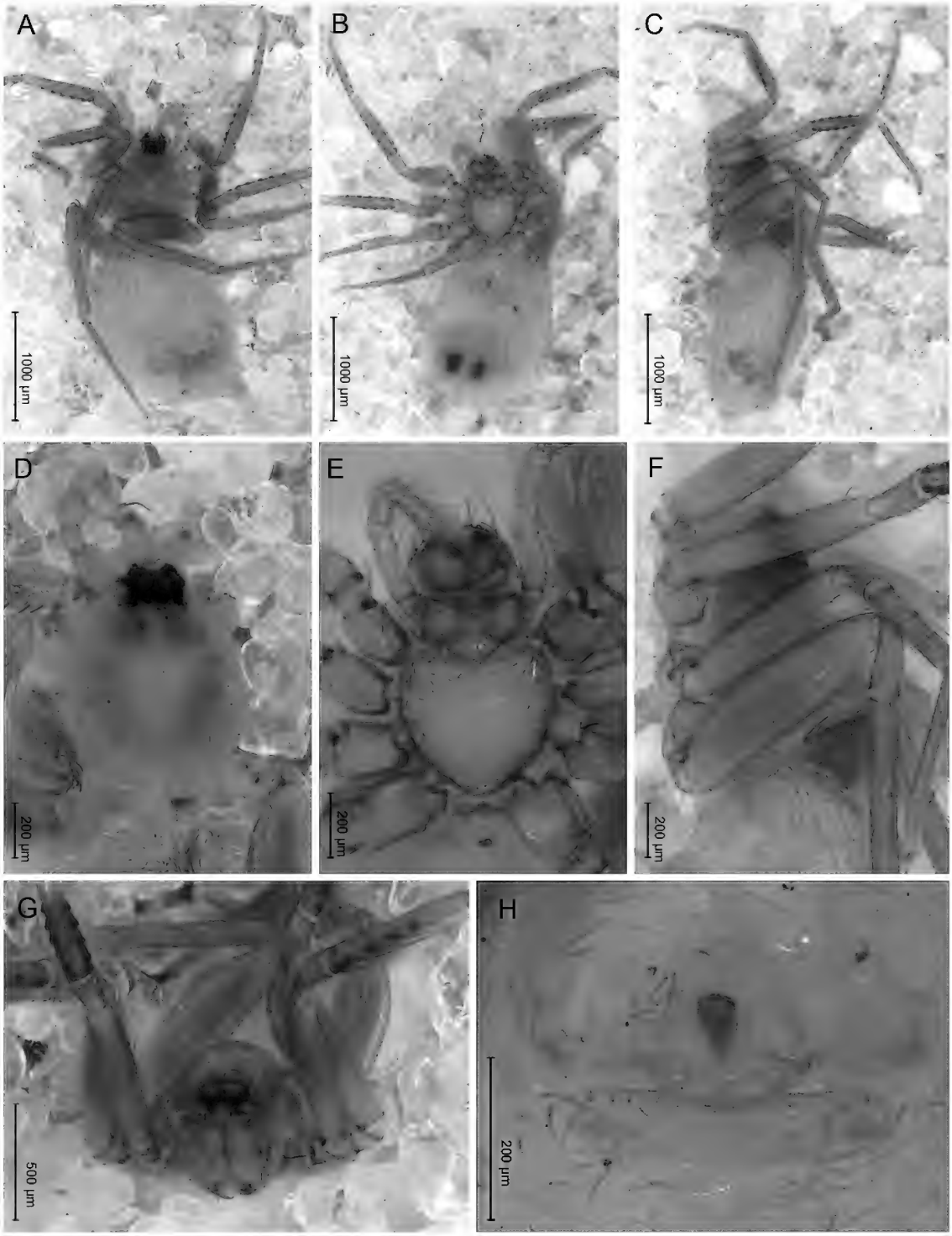


Fig. 108. *Neotrops trapellus* (Chickering), female PBI_OON 01696. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

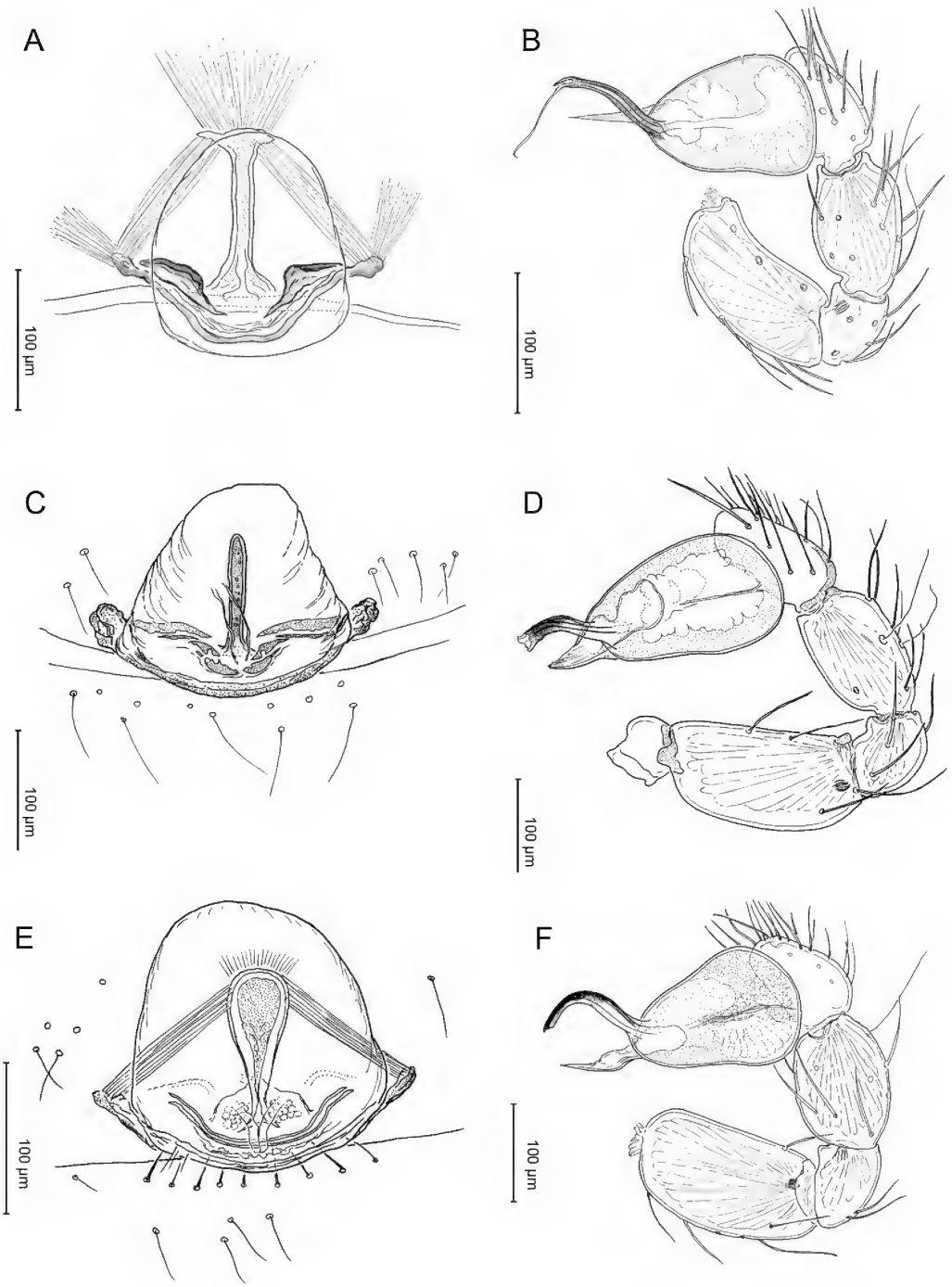


Fig. 109. *Neotrops* spp. genitalia, cleared. **A–B.** *Neotrops caparu*, new species. **C–D**, *N. amacuro,* new species. **E–F**, *N. trapellus* (Chickering). **A.** Internal female genitalia, dorsal view (PBI_OON 43162). **B.** Male palp, retrolateral view (PBI_OON 43162). **C.** Internal female genitalia, dorsal view (PBI_OON 01698). **D.** Male palp, retrolateral view (PBI_OON 01693). **E.** Internal female genitalia, dorsal view (PBI_OON 01696). **F.** Male palp, retrolateral view (PBI_OON 36843).

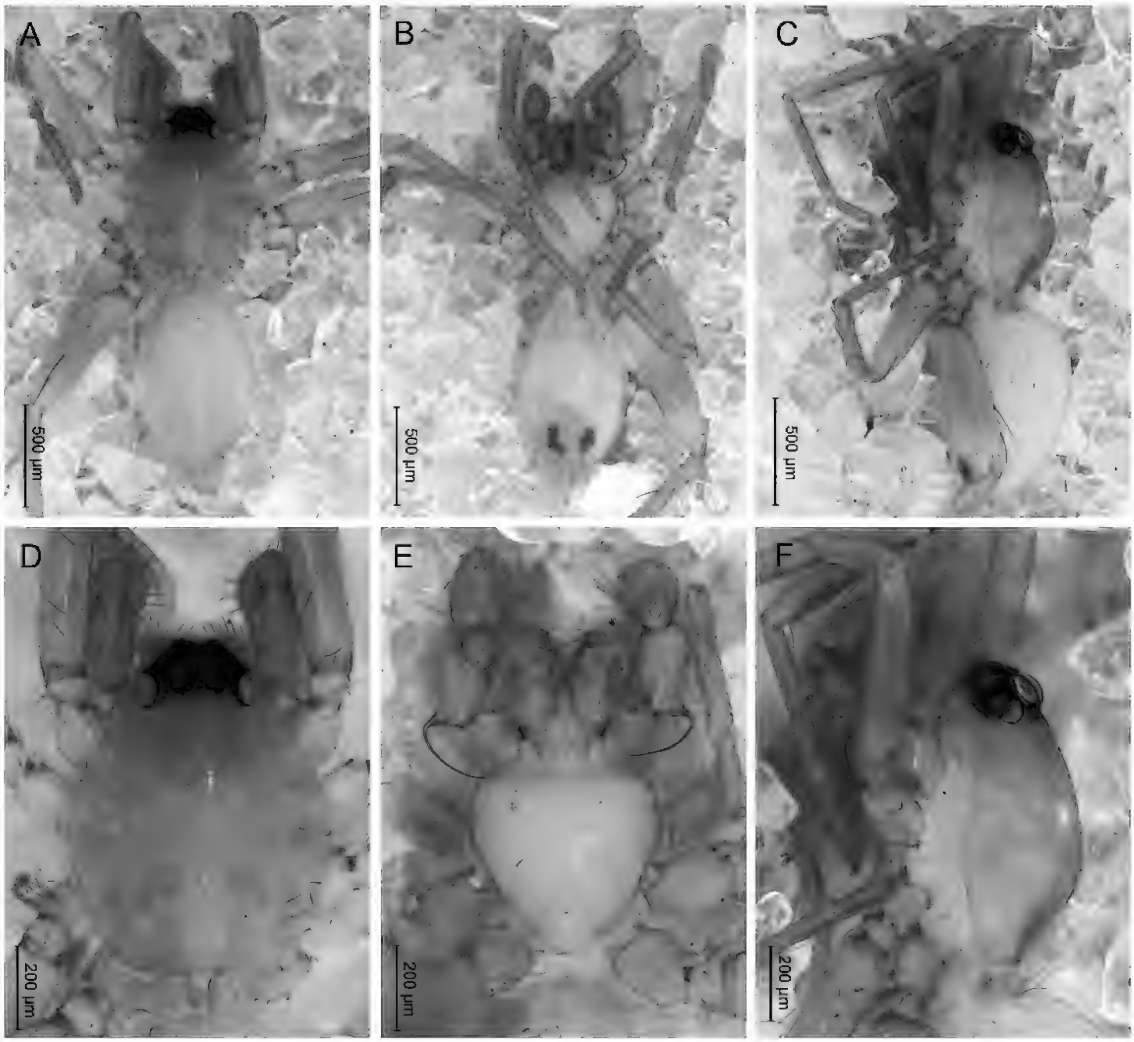


Fig. 110. *Neotrops pakitza*, new species, male PBI_OON 43053. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

margin not extending posteriorly of coxae IV; setae sparse, evenly scattered. Mouthparts: chelicerae, endites, and labium yellow; cheliceral setae dark, evenly scattered. Labium anterior margin indented at middle; with six or more setae on anterior margin. Endites distally not excavated, anterior margin with laterally directed laminar expansions (fig. 110E). **Abdomen:** Dorsum pale white. Book lung covers round. Postepigastric scutum yellow. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus absent. **Legs:** Yellow; femur IV slightly enlarged. Leg spination: leg I: femora pv0-0-0-1-1, tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg II: tibiae v2-2-2-2-2-0, metatarsi v2-2-2; leg III: femora d1-1-1, tibiae p1-1, v1-ap, metatarsi r1, v1ap; leg IV: femora d0-1-1-1, tibiae d1, p1-1, v1-2ap; metatarsi p1-1, v1-2ap. Trichobothria not examined. **Genitalia** (figs. 111B–D, 116B): Palp proximal segments pale orange; femur normal size, two or more times as long as trochanter; cymbium pale orange, ovoid in dorsal view, not fused with bulb; bulb yellow, more than two times as long as cymbium; conductor broad,

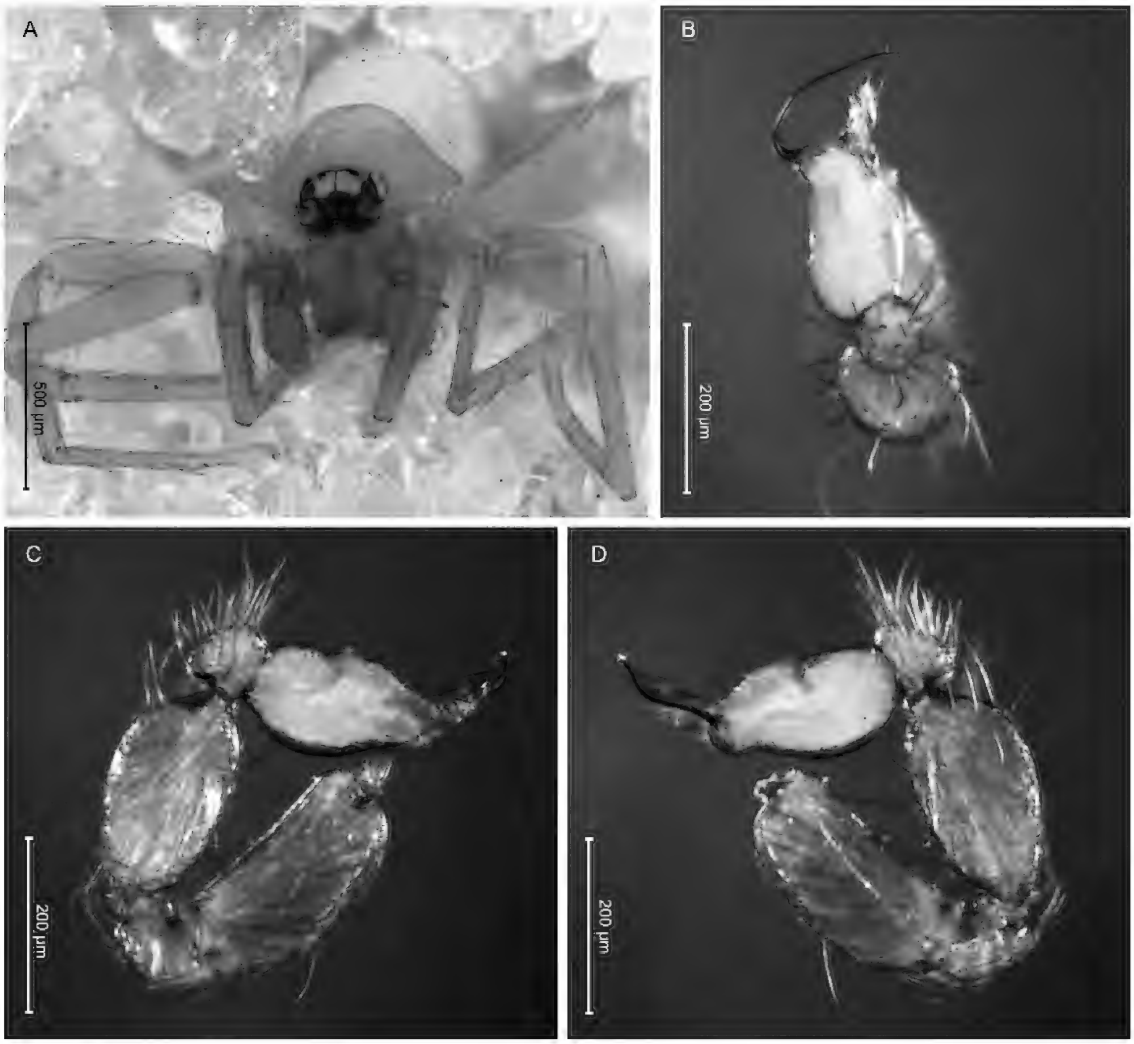


Fig. 111. *Neotrops pakitza*, new species, male PBI_OON 43053. **A.** Habitus, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

elongated, membranous, nearly parallel to the embolus (in lateral view); embolus dark, with a small curled tip (fig. 116B).

FEMALE (PBI_OON 14822). Total length 1.75. As in male except as noted. **Cephalothorax:** Eyes ALE-PLE separated by ALE radius to ALE diameter, PME separated by less than their radius. Sternum precoxal triangles present; setae dark. Labium elongated hexagon. Palp spines absent. **Abdomen:** Postepigastric area setae dark, needlelike. Colulus represented only by setae. **Legs:** Femur IV not thickened, same size as femora I–III, patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora pv0-0-1-1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: metatarsi d1-0, p1-1, r0-1, v2ap; leg IV: metatarsi p1-1, r1-1, v2ap. **Genitalia:** Ventral view: anterior receptacle with long stalk and transversely mushroom-shaped terminal part, easily visible through the cuticle (fig. 112H). Posterior plate distally widened, shorter than anterior receptacle, laterally surpassing ends of transverse bar, resembles inverted triangle (fig. 116A).

OTHER MATERIAL EXAMINED: Same data as the types: 1♀ (MUSM-ENT 0501576

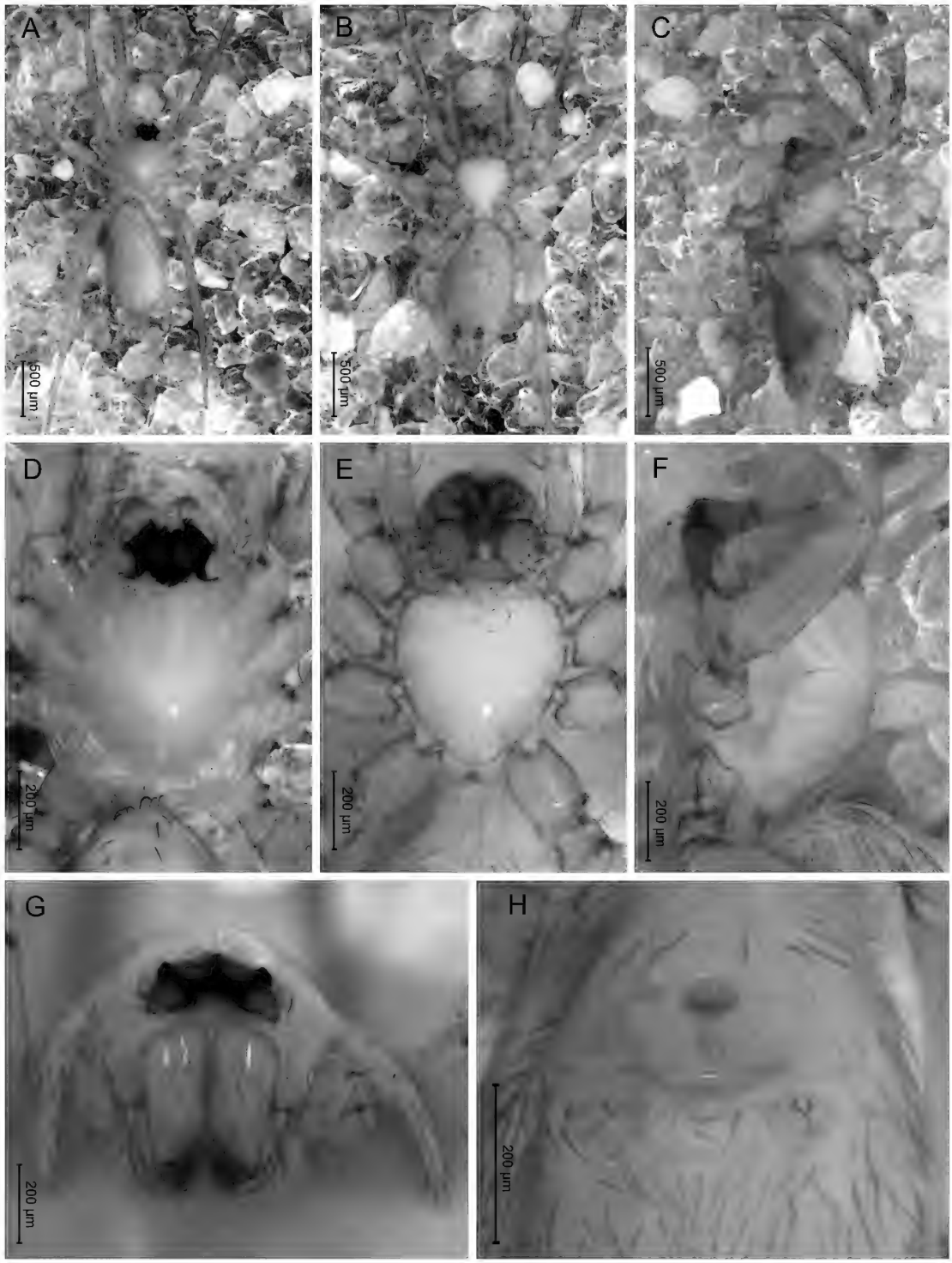


Fig. 112. *Neotrops pakitza*, new species, female PBI_OON 14822. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Same, anterior view. **H.** Epigynum, ventral view.

PBI_OON 43053), 1♂, 1♀ (MUSM-ENT 0501557 PBI_OON 43054), 2♀ (MUSM-ENT 0501576 PBI_OON 43052); CICRA. 2do. Mirador, Mar. 04, 2006, M. Deza, 1♀ (MEKRB PBI_OON 14822).

DISTRIBUTION: Madre de Dios, Peru (map 8).

Neotrops kopuchianae, new species
Figures 113–115, 116C–D; map 6

TYPES: Male holotype from Bolivia: Santa Cruz: Guarayos: Concesión Forestal La Chonta, Amazon forest with selective logging, understory, 330 m, −15.71166°, −62.77222°, Oct. 26, 2010, to Oct. 30, 2010, Grismado, C., Vacaflores, M.R., and Pérez, M. (CBF PBI_OON 43124). Deposited in CBF. Same data, one male and one female paratypes (MACN-AR 26911 PBI_OON 43125, MACN-AR 26910 PBI_OON 43136), deposited in MACN-Ar; and two female paratypes (CBF PBI_OON 43127, CBF PBI_OON 43128), deposited in CBF.

ETYMOLOGY: The specific name of this species is a patronym in honor of the Argentine ornithologist Cecilia Kopuchian (MACN), who invited the first author on the field trip to Bolivia, and in recognition of her help and support in that campaign.

DIAGNOSIS: *N. kopuchianae* males are very similar to those of *N. caparu* by the shape of the bulb and its terminal elements, but differ by the bulb being distally more tapering, and in lacking a small protrusion in the embolus, where the filiform part arises (figs. 114B–D, 116D). Females also resemble those of *N. caparu* by the T-shaped anterior receptacle, but its transverse projections are longer (fig. 116C).

DESCRIPTION: MALE (holotype, PBI_OON 43124). Total length 1.69. **Cephalothorax:** Carapace yellow, broadly oval in dorsal view, pars cephalica strongly elevated in lateral view, anteriorly narrowed to less than half their maximum width; lateral margin straight; nonmarginal pars cephalica setae absent, seem to be lost in the type specimen; nonmarginal pars thoracica setae dark, needlelike; marginal setae dark, needlelike. Clypeus setae dark, needlelike. Eyes on a darkened pigmented area, all subequal, all eyes oval; posterior eye row straight from front; ALE separated by their radius to diameter, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius. Sternum longer than wide, yellowish white, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV; setae sparse, evenly scattered. Mouthparts: chelicerae, endites, and labium yellowish white; cheliceral setae light, evenly scattered. Labium anterior margin indented at middle; with 1 or 2 setae on anterior margin. Endites distally excavated, with a subdistal unsclerotized ring that separate an apical segment, with a rolled tip (fig. 113E). **Abdomen:** Dorsum pale white. Book lung covers elliptical. Postepigastric scutum yellow. Spinneret scutum absent. Dorsum setae dark, needlelike. Colulus represented only by setae. **Legs:** Yellow; femur IV thickened, much larger than femora I–III (fig. 113C). Leg spination: leg I: femora d1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg II: femora d1-0, tibiae v2-2-2-2-2-0, metatarsi v2-2-2-2; leg III: femora d1-1, tibiae d1, p1-1, r1-1, v1-2ap, metatarsi d0-0-1, p1-1, r1-1, v2ap; leg IV: femora d1-1, tibiae d1, p1-1, r1-1, v1-2ap, metatarsi d0-0-1, p1-1, r1-1, v1-0-2ap. Trichobothria not examined. **Genitalia:** Palp proximal segments yellow; femur normal size, two or more times as long as trochanter; cymbium yellow, ovoid in dorsal view, not fused with bulb; bulb white, 1 to 1.5 times as long as cymbium, slender, tapering apically; conductor distally straight and acute; embolus dark, thick, and gently curved in the proximal half, abruptly narrowed, almost thread shaped, in the distal half (figs. 114B–D, 116D).

FEMALE (PBI_OON 43127). Total length 2.28. As in male except as noted. **Cephalothorax:** Carapace nonmarginal pars cephalica setae needlelike, in U-shaped row. Eyes on a darkened pigmented area. Sternum precoxal triangles present; setae dark. Labium elongated hexagon. Palp spines absent. **Abdomen:** Postepigastric area setae dark, needlelike. **Legs:** Patella plus tibia I nearly as long as carapace. Leg spination: leg I: femora d1-0, tibiae v2-2-2-2-2-0-0, metatarsi v2-2-2-2; leg II: femora d1-0, tibiae v2-2-2-2-2-0-0, metatarsi v2-2-2-2; leg III: femora d1-1, tibiae d1, p1-1, r1-1, v1-2ap, metatarsi d1-0-1, p1-1, r1-1, v1-0-2ap; leg IV: femora d1-1, tibiae d1,

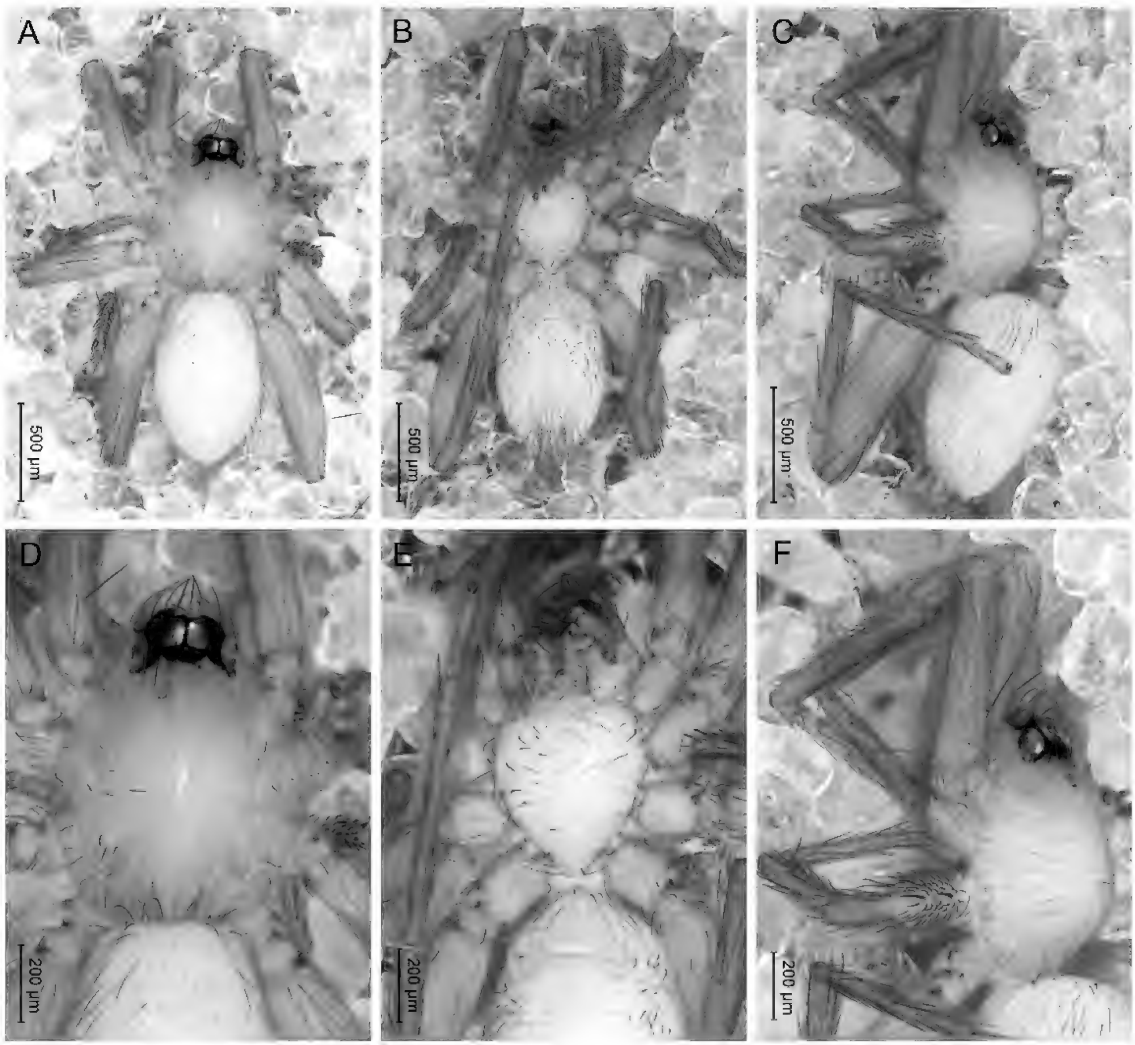


Fig. 113. *Neotrops kopuchianae*, new species, male PBI_OON 43124. **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view.

p1-1, r1-1, v1-2ap, metatarsi d1-0-1, p1-1, r1-1, v1-0-2ap. **Genitalia:** Dorsal view: anterior receptacle T-shaped, without conspicuous lumen, with wide and sclerotized basal section with a small, rounded opening; dorsal plate nearly rectangular, as long as anterior receptacle (fig. 116C).

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Only know from the type locality, in Santa Cruz Department, Bolivia (map 6).

NATURAL HISTORY: The specimens have been taken by beating foliage, especially from plant parts with accumulations of suspended soil, detritus, dead leaves, and twigs. The type locality is in an area of Amazon forest with selective logging.

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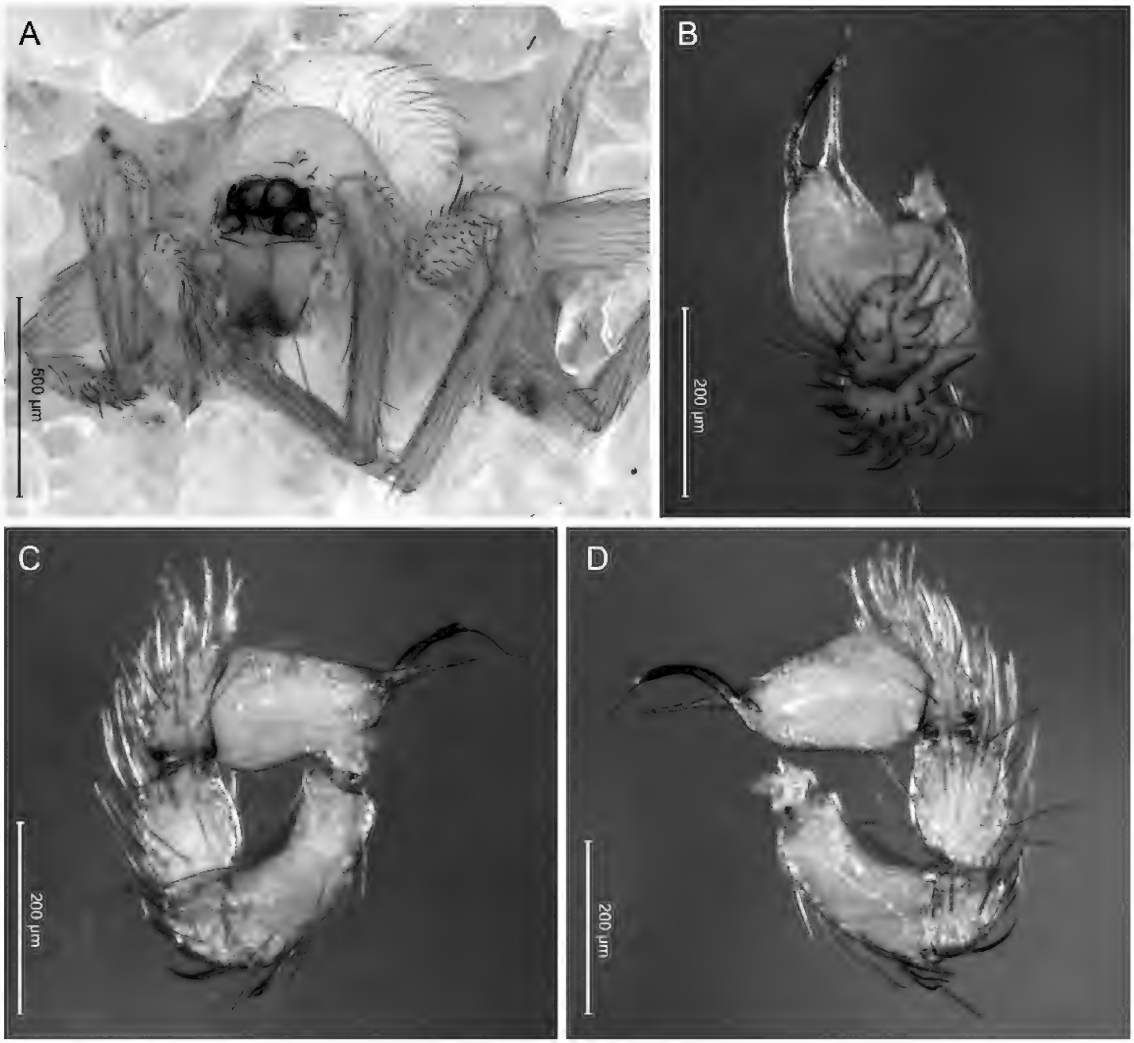

Fig. 114. *Neotrops kopuchianae*, new species, male PBI_OON 43124. **A.** Habitus, anterior view. **B–D.** Palp. **B.** Dorsal view. **C.** Prolateral view. **D.** Retrolateral view.

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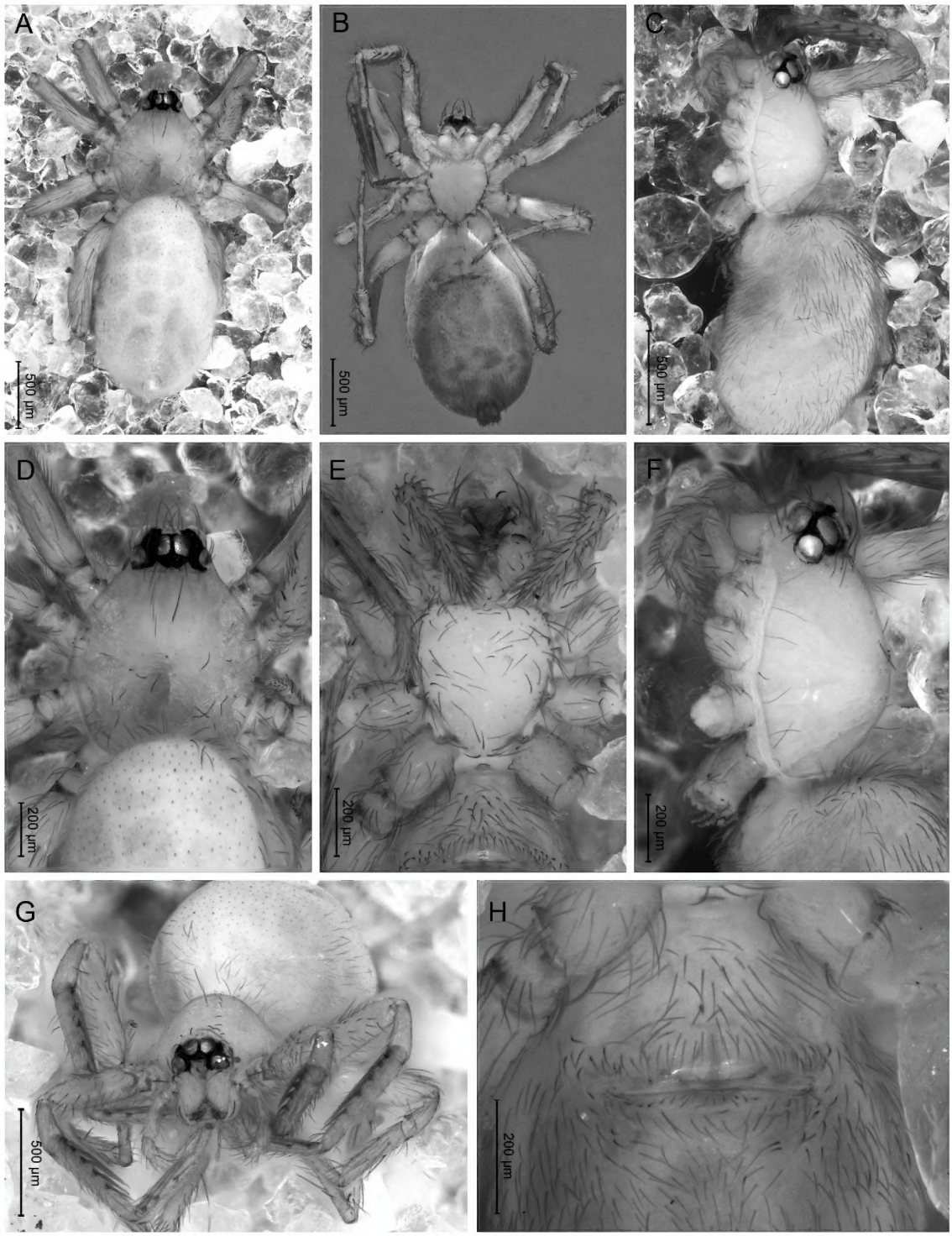

Fig. 115. *Neotrops kopuchianae*, female (**A–B, D, G,** PBI_OON 43127; **C, E–F, H,** PBI_OON 43136). **A.** Habitus, dorsal view. **B.** Same, ventral view. **C.** Same, lateral view. **D.** Carapace, dorsal view. **E.** Cephalothorax, ventral view. **F.** Same, lateral view. **G.** Habitus, anterior view. **H.** Epigynum, ventral view.

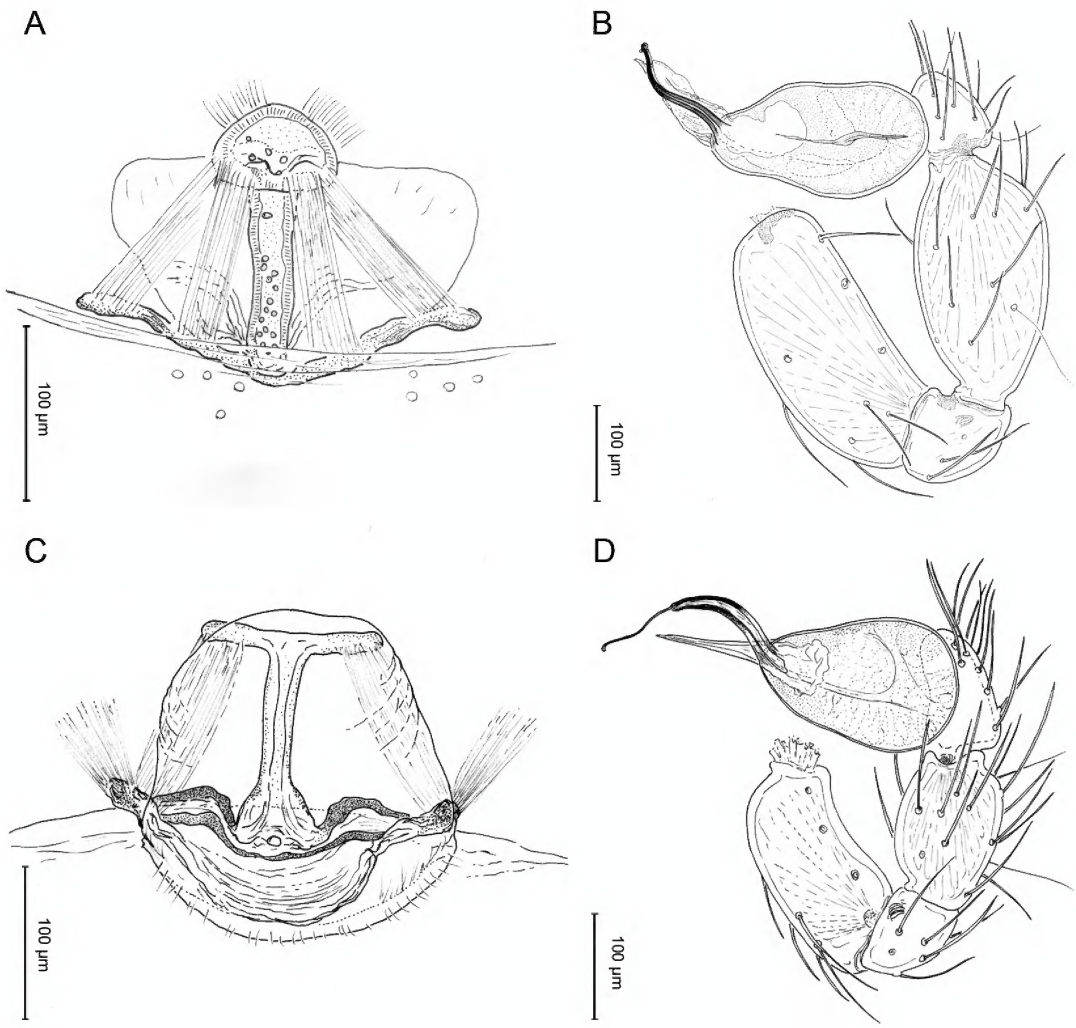

Fig. 116. *Neotrops* spp. genitalia, cleared. **A–B.** *N. pakitza*, new species, **C–D.** *N. kopuchianae*, new species. **A.** Internal female genitalia, ventral view (PBI_OON 14822). **B.** Male palp, retrolateral view (PBI_OON 43053). **C.** Internal female genitalia, dorsal view (PBI_OON 43136). **D.** Male palp, retrolateral view (PBI_OON 43124).

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